FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

JULY, 1956

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Special Feature

Kankakee, Ill., firemen and civilian volunteer rescue 11-year-old boy from raging torrent below falls in river in dramatic demonstration of the need for

MARINE RESCUE SQUADS

Swimming is great... but

are you ready

with the most effective artificial respiration known to science?

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Resuscitators

"Simplest and Safest"

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You can't buy emergency vehicle safety by the pound or foot. When you buy FEDERAL SIGNALS, you buy maximum value per dollar.

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the leader in its field with a $55.00 PROPELLO Ray light
sells for $140.00

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FIRE ENGINEERING

VOL. 109 JULY, 1956 NO. 7

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IF IT'S IMPORTANT TO THE FIRE SERVICE IT'S IN FIRE ENGINEERING

In New York City firemen train in radiac.

In Philadelphia, German-patented, American-made aerial ladders become standard equipment.

In New Jersey, a company introduces a "nuclear" fire detection system.

In Los Angeles and San Francisco, fire stations with a "new look" are being built—in bunches.

In cities, towns and villages from Flin Flon, Man., Canada, to Florida; from Portland, Ore., to Portland, Me., fire suppression forces are striving to keep on top of the new and dangerous hazards imposed by this atomic and chemical era, in which we live and work.

New appliances, new apparatus, new techniques and methods are making the headlines every day.

The story of these happenings is being told in the editorial and advertising sections of FIRE ENGINEERING month after month. That is why readers of FIRE ENGINEERING look forward to its arrival, read it and study it and use it in their chosen calling.

The Publishers

FIRE ENGINEERING—A CONSOLIDATION OF FIRE AND WATER ENGINEERING, THE FIRE ENGINEER, FIRE PROTECTION AND FIRE SERVICE

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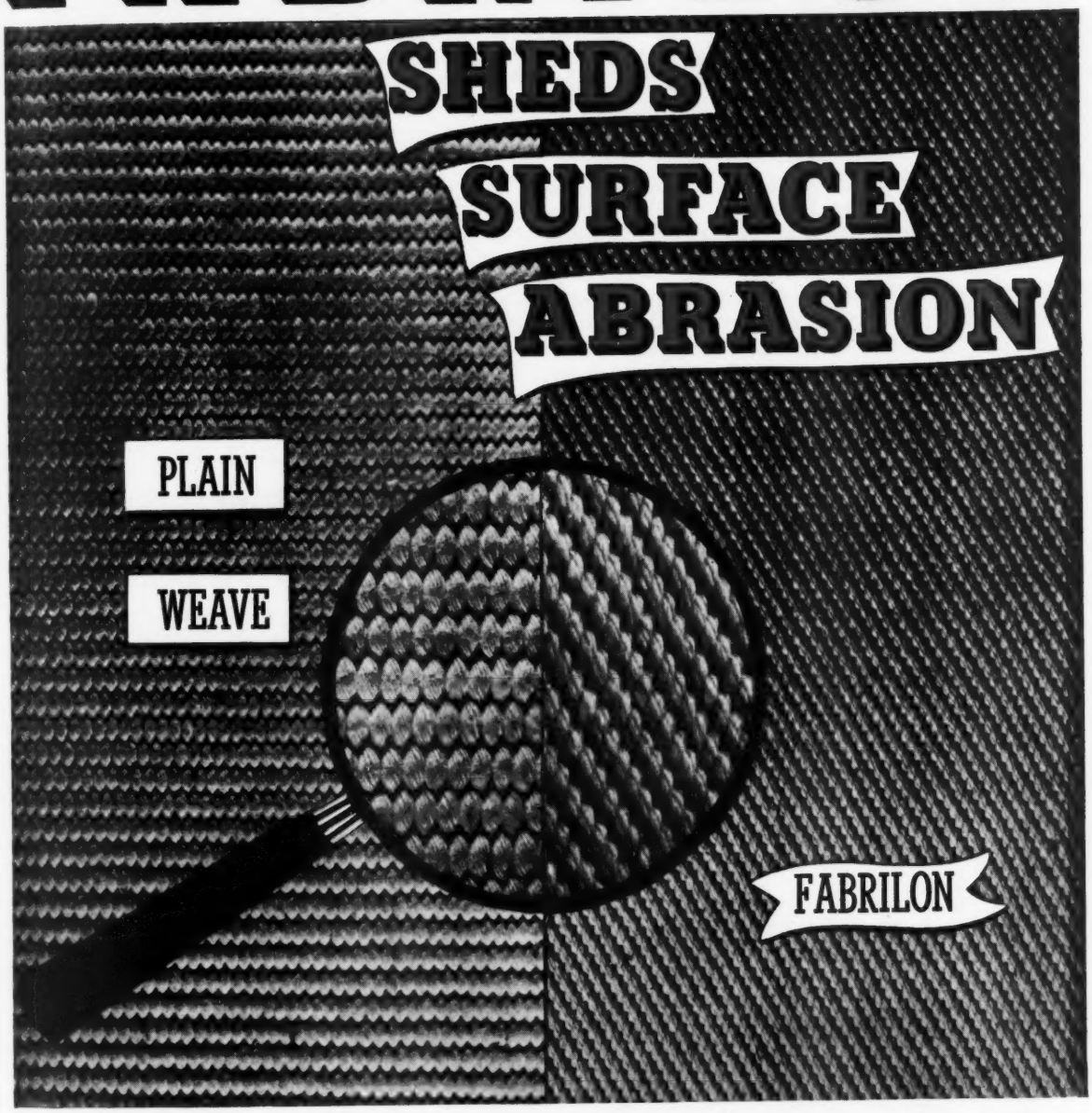
FABRILON



In FABRILON the remarkably fine weave presents a *long lasting surface* against abrasion, snagging and other types of service wear. The closely woven *diagonal or twill* stitch passes along surface friction like the runners of a sled. This means *less wear and drag* when the hose is pulled over the ground or around obstacles. It also means *smooth texture, ease of handling* and *efficient loading* in the hose bed.

FABRIC FIRE HOSE COMPANY

THE ONLY EXCLUSIVE MANUFACTURER OF FIRE HOSE IN AMERICA

SANDY HOOK CONNECTICUT

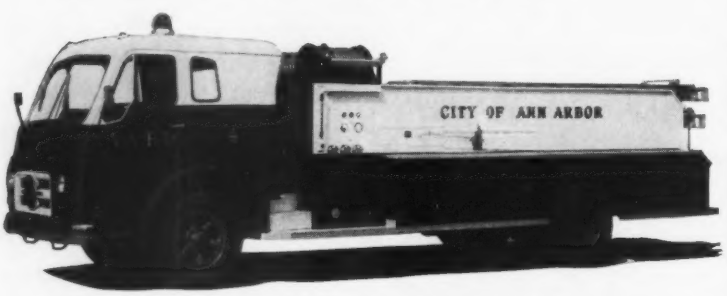
engineered for all-around efficiency

John BEAN multi-purpose High Pressure Fog Fire Fighters

The efficiency of multi-purpose apparatus depends upon a combination of fire-fighting punch and a maximum of easily accessible space for extra equipment. John Bean Multi-purpose High Pressure Fog Fire Fighters give you both.

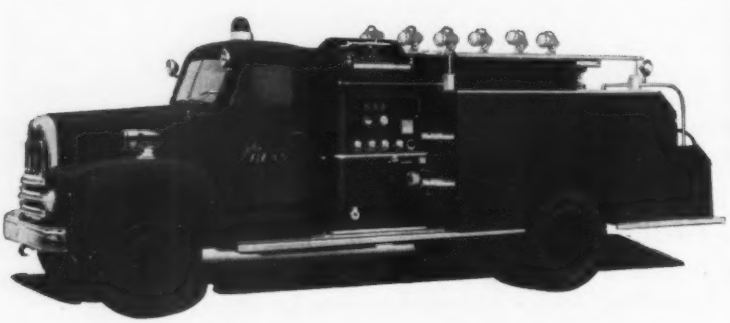
Consider these advantages: (1) Only a small amount of water is needed to make a John Bean fire fighting unit ready for immediate, hard-hitting action. (2) Water converted to high pressure fog is at least ten times more effective than ordinary fire streams. (3) High pressure fog gives you a "triple-threat" fire killing punch — it cools, it smothers, it isolates simultaneously.

The result is a powerful, self-contained fire fighter with a low center of gravity, designed to accommodate all types of accessory tools and emergency equipment.



COMBINATION LADDER AND RESCUE UNIT

Fully equipped for high pressure fog fire fighting with 7-man cab. Carries 186 feet of ladder equipment, plus rescue appliances, two-way radio and salvage covers.



COMBINATION SQUAD AND RESCUE UNIT

This high pressure fog fire-fighter is designed with exceptionally large weatherproof compartments to properly store rescue, salvage and light generating equipment.

Write us details of your requirements today

AMPLE SPACE FOR THE EQUIPMENT YOU NEED

Following are typical types of equipment that John Bean Fire Fighters are engineered to accommodate:

SALVAGE EQUIPMENT

RESCUE EQUIPMENT

FORCEABLE ENTRY TOOLS

REGULAR FIRE DEPARTMENT TOOLS AND APPLIANCES

LADDERS (up to 45 foot lengths)

LIGHT GENERATORS (up to 3500 watt capacity)

FLOOD LIGHTS

TWO-WAY RADIO

WALKIE-TALKIE

ACETYLENE CUTTING TORCHES

PORTABLE POWER SAWS, DRILLS, ETC.

FIRST AID EQUIPMENT

JOHN fmc® BEAN

FOOD MACHINERY AND CHEMICAL CORPORATION

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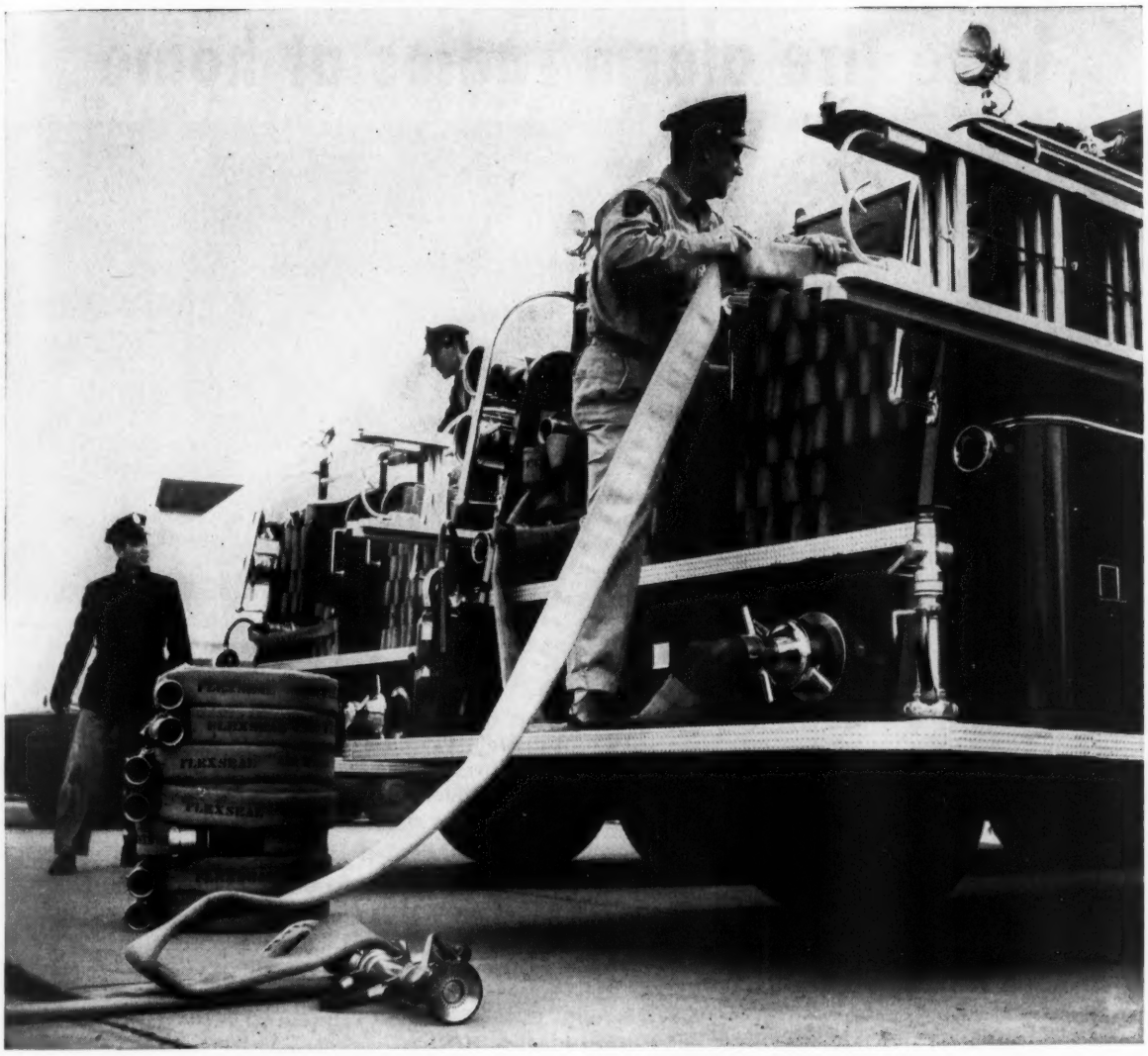
ORIGINAL HIGH PRESSURE FOG FIRE FIGHTER

A PRODUCT OF FOOD MACHINERY AND CHEMICAL CORPORATION

B.F.Goodrich



Now B. F. Goodrich hose has 10 times more mildew resistance

HERE'S the new fire hose that's 10 times more resistant to mildew attack and rotting. It's B. F. Goodrich Flexseal, protected with the exclusive Superseal treatment.

Unlike ordinary treatments that just coat the surface of hose, the Superseal solution penetrates every cord in both the inner and outer jacket. This special chemical treatment also protects against moisture absorption and freezing, increases the hose's resistance to fire.

However, this added protection is just one reason why the Maple Heights, Ohio, Fire Department equipped their two new pumpers with B. F. Goodrich hose. With Flexseal, they get a hose that's 23% lighter, 50% stronger, much more flexible than ordinary hose. Trucks can carry a third more hose, and it cuts minutes from loading time because it racks naturally on the truck bed, doesn't kink or twist.

And most important—with all these improvements, B. F. Goodrich Flexseal costs no more than ordinary treated hose. There's a B. F. Goodrich fire hose distributor near you, ready to bring this and other B. F. Goodrich hose improvements to your department. Give him a call or write *The B. F. Goodrich Company, Dept. M-694, Akron 18, Ohio.*

B.F.Goodrich

INDUSTRIAL PRODUCTS DIVISION

Volunteer firemen in Danville, Indiana have fire alarm radios at home

New General Electric Tone Control Receivers Pick Up Fire Call Signals Relayed Through Police Radio System

Bedside Fire Alarm! G-E monitor receiver at home of Captain Campbell makes a 24-hour contact possible. Tone system picks up Danville fire calls only.

Fire Report Coming In! As the police department receives a 'phoned fire report, Danville dispatcher Lelia Brown radios the alarm to fire department volunteers through General Electric receivers in their homes.

Ready To Roll! Danville Police Chief Berzenye checks fire location with Fire Chief Rader. Truck is equipped with General Electric high band two-way radio.

Member turn-out for alarms in Danville, Indiana is consistently high, regardless of the hour. The reason: There are fifteen key members of this crack volunteer fire company who have General Electric radio receivers in their homes. Fire Chief John Rader estimates these radios will pay for themselves in the first three years of operation.

Entire Department G-E Radio-Equipped

All police and fire radio in Danville is General Electric equipment. Two fire trucks and the Chief's car are equipped with complete two-way units, in addition to the police radio and home monitors which are pre-tuned to receive fire calls only. The high band 50-watt system has an operating range of 40 miles. Hendricks County fire equipment is completely radio-equipped. Radio contact with fire and police agencies in neighboring counties speeds mutual aid activities.

2-WAY MOBILE RADIO

New G-E Progress Line Radios

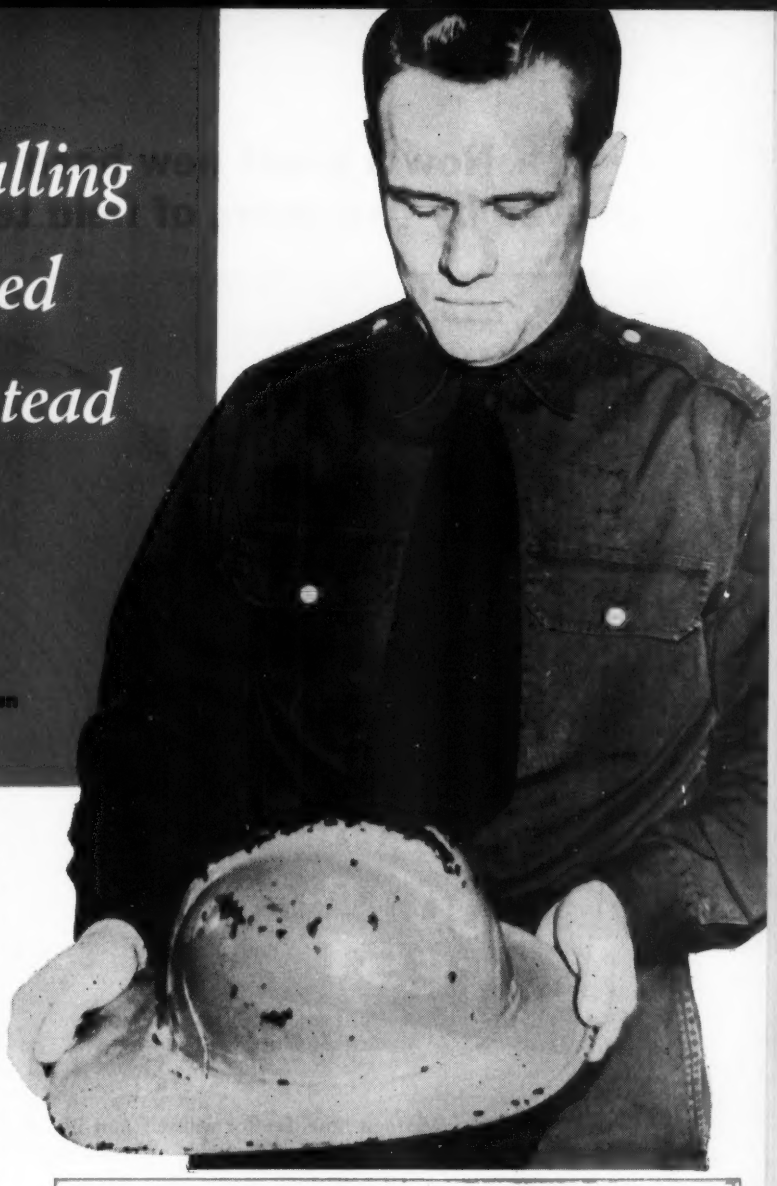
New Progress Line equipment can provide tone signal calling, automatic re-call, and other important advantages. Ask your G-E Communications Counselor to show you how a system like the Danville network can improve your communications. Or, write: *General Electric Company, Communication Equipment, Section* X5976, *Electronics Park, Syracuse, New York.*

Progress Is Our Most Important Product

GENERAL ELECTRIC

"What if that falling wall had bounced off my head instead of this M-S-A helmet!"

says Bernie Kush, Fireman
Omaha, Nebraska



Most firemen agree that it's best not to think of what could have happened *if* . . . but Bernie Kush of the Omaha, Nebraska, Fire Department rates a kind of special excuse if he wonders once in a while about his narrow escape.

It was a three-alarm fire, and things were happening fast. Fireman Kush was moving in with his hose, when he heard warning shouts from the chief. He looked up, and saw it coming . . . the entire wall was collapsing. He made a dash for cover, but it was too late. Bricks, rubble, debris crashed down. In seconds he was buried waist deep.

Fireman Kush commented later that he lost count of the number of times his helmet was hit by shattered wall-structure, but he did remember the one that struck hard enough to crack the plastic shell. It's easy to understand why Kush calls his helmet a "life saver."

MSA
SAFETY EQUIPMENT HEADQUARTERS

Call the M-S-A man on your every safety problem . . . his job is to help you

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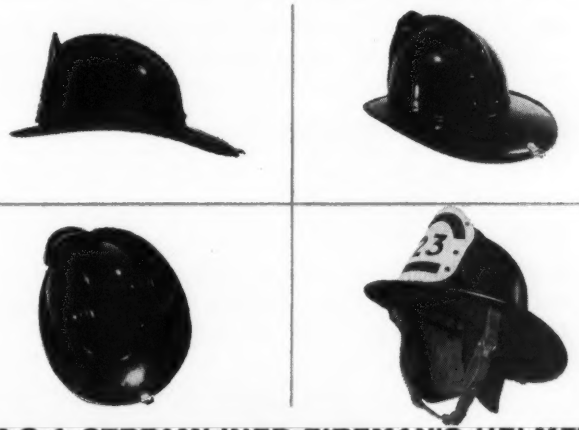
At Your Service: 76 Branch Offices in the United States

MINE SAFETY APPLIANCES CO. OF CANADA, LTD.
Toronto, Montreal, Calgary, Edmonton, Winnipeg, Vancouver, Sydney, N.S. • Representatives in Principal Cities in Mexico, Central and South America
Cable Address: "MINSAF" Pittsburgh



M-S-A STREAMLINED FIREMAN'S HELMET

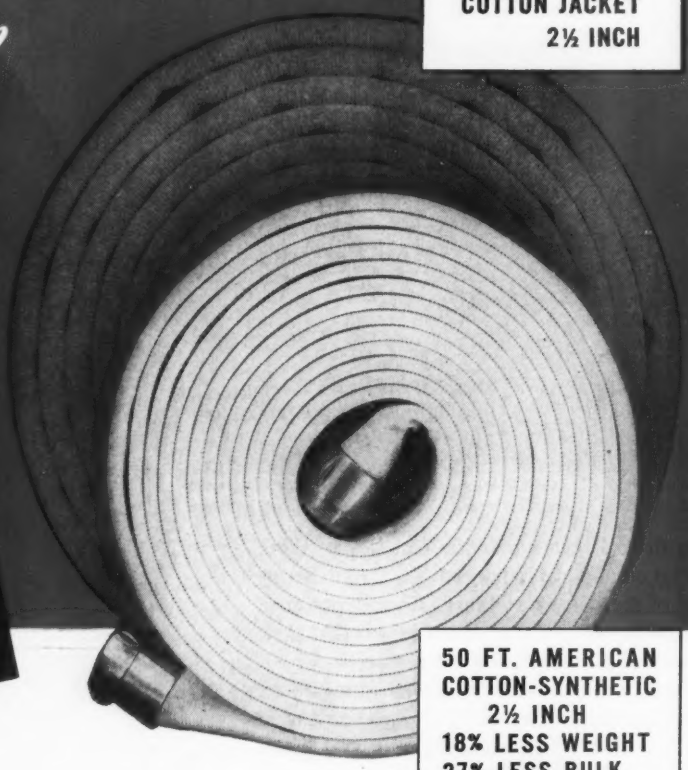
Any way you look at it, the M-S-A Streamlined Fireman's Helmet has the appearance that firemen like. But that's only part of the story. This helmet provides double protection. The one-piece, high-pressure molded construction takes bumps and blows without passing them on. And its high dielectric strength protects against electrical hazards. It is made of laminated plastic, so it does not soften when exposed to water, moisture, or common chemicals, or warp with heat. Easily zipped-in winter liner assures all-weather comfort. Write for details.

Now a great new hose proved by two years of field testing

THE *American*

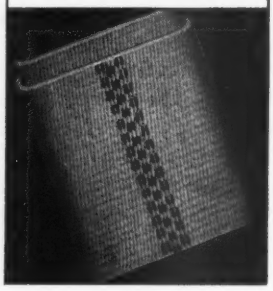
COTTON-SYNTHETIC JACKET *Hose*

400 AND 600 LB. TEST



50 FT. ORDINARY COTTON JACKET 2½ INCH

50 FT. AMERICAN COTTON-SYNTHETIC 2½ INCH
18% LESS WEIGHT
27% LESS BULK
50% STRONGER



Try this great new hose. See for yourself how its long-lived cotton-synthetic jacket and laminated natural rubber lining make for easy handling, while saving space and weight. Here's the story —

EASIER TO HANDLE—50′ of this AMERICAN Cotton-Synthetic Hose weighs 18% less than 50′ of average cotton jacket hose . . . enables firemen to move more hose faster. Also lies flatter, coils better, stays flexible wet or dry.

SAVES SPACE—AMERICAN Cotton-Synthetic enables you to carry at least 25% more hose.

STRONGER—High strength-to-weight ratio remains same wet or dry . . . tests prove it 50% stronger than regular hose.

Why lug heavy, bulky, hard-to-handle hose?
Order AMERICAN Cotton-Synthetic Jacket Hose—available in 400 and 600-lb. test—from your dealer NOW. . . or write us for details.

THE *American* RUBBER MANUFACTURING CO.

AR-26

MAKE SURE; Look for Identifying Stripe and Test Report

AMERICAN Cotton-Synthetic Jacket Hose has red, white, and blue identifying stripe. Each 50′ length is factory proof tested with couplings on, for strength, stretch, and twist. Test report accompanies hose.

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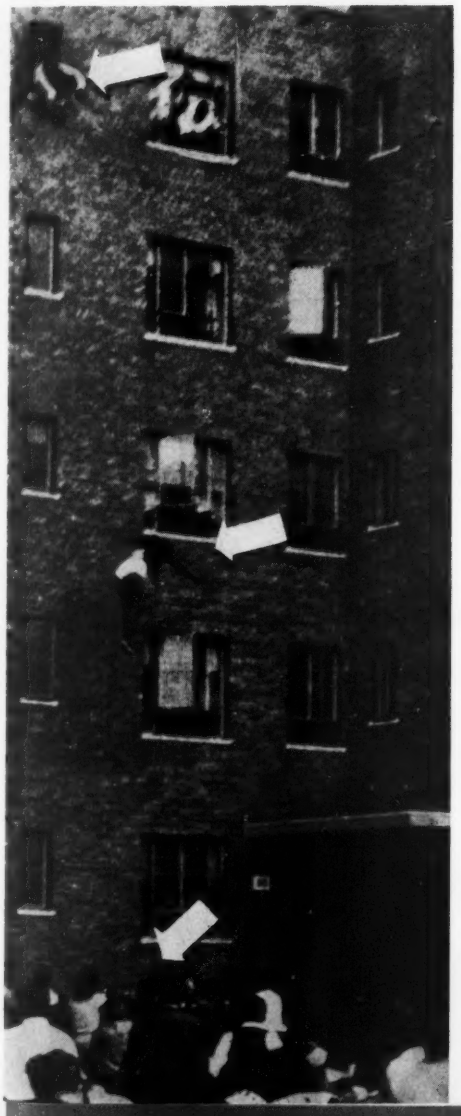
—again—

NEWARK FIRE DEPT. MAKES another RESCUE

on same spot- with same NET!



ATLAS LIFE NETS

FASTEST-SAFEST MEANS OF RESCUE

Another rescue—another life saved in exactly the same spot as another life was saved a few months ago—and with the very same ATLAS NET!

Here again is convincing evidence that it pays to have an ATLAS LIFE NET on every truck! Just a few months ago a few Newark, N. J., firemen and a few men from the crowd caught and saved a man from a 9th floor jump, something many fire chiefs said "couldn't be done"—but it was!—and now from the 5th floor and with the same net, a young mother of four children was saved.

The ATLAS LIFE NET has saved hundreds of persons —it's cost is nothing when it helps even in one rescue, but—spread the cost over the many years an ATLAS lasts and the cost is even more insignificant. Nothing compares with an ATLAS NET in structure—made with steel forged hinges with strong shock absorbers, and a specially woven bottom—all combine to give you a net that serves for many years and many rescues if need be. The wise chief will not be caught without one —some chiefs put them on every pumper as well as ladder truck. *Nets, Pompier and Hand Brake Belts, Training Tower Nets and Frames.*

Specify ATLAS on all new apparatus!

ATLAS SAFETY EQUIPMENT CO., Inc. 27 WARREN ST. NEW YORK 7, N.Y.

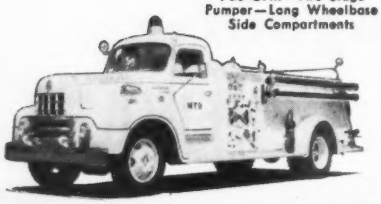
BOARDMAN PUMPERS

...engineered for YOUR Community!

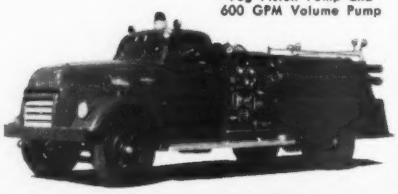
Your community deserves the best . . . and the best is a Boardman Pumper unit. Designed for any size city, Boardman Pumpers offer the most efficient, economical fire protection it is possible to buy. Equipped with dependable Waterous pumps, these units will give years of trouble-free service. Available with pump capacities of 200, 500, 600, 750 or 1,000 GPM. Your unit can be designed with special booster tanks, compartments, or equipment built to your specifications. Dependable . . . and economical, that's a Boardman Pumper. It can be mounted on the standard chassis of your choice or on a Boardman custom unit. Write today for complete information! Learn how your community can have economical Fire Protection with a Boardman Pumper unit.

They're efficient!
They're attractive!
They're economical!

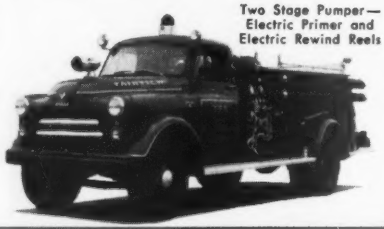
750 GPM—Two Stage Pumper—Long Wheelbase Side Compartments



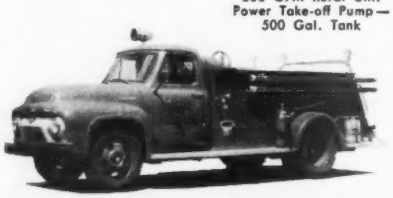
Combination High Pressure Fog Piston Pump and 600 GPM Volume Pump



Two Stage Pumper—Electric Primer and Electric Rewind Reels



200 GPM Rural Unit Power Take-off Pump—500 Gal. Tank



750 GPM Custom Pumper 240 H. P. Dual Ignition Waukesha Engine

500 GPM Front Mount Pumper with 500 Gal. Tank

MANUFACTURING DIVISION

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MANUFACTURER OF DEPENDABLE PUMPERS AND TANKERS

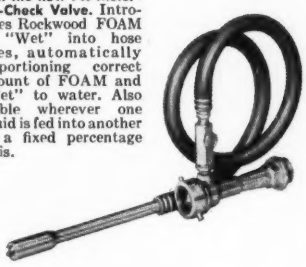
Here's your "Task Force" for any type of fire

Complete team of Rockwood portable products combines speed, versatility and economy

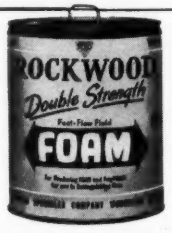
Separately, each of these Rockwood products has its own particular advantages for fighting various types of fires. Together, they make a mobile, multi-purpose task force that delivers a whale of a lot of protection against *any* type of fire, whether it's Class A (wood, paper, rags, etc.), or Class B (flammable liquids). That includes personnel protection, too, because safety for the men who use them is an essential factor in all Rockwood fire fighting products.

Rockwood's long, practical experience and constant research bring you not only new *efficiency* but new *economy* in fire-fighting methods and equipment. It will pay you to learn more about these and many other Rockwood products. Mail the coupon today for complete information on Rockwood's specialized fire-fighting products.

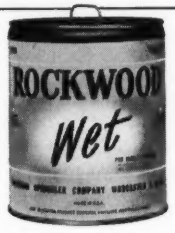
* **Type SG-60 Nozzle.** A true all-purpose nozzle that fights fire 5 ways. It discharges high velocity WaterFOG, low velocity WaterFOG (with applicator), FogFOAM, solid stream of water or solid stream of FOAM.



FOAM and "Wet" Eductor with the new FW Metering-Check Valve. Introduces Rockwood FOAM or "Wet" into hose lines, automatically proportioning correct amount of FOAM and "Wet" to water. Also usable wherever one liquid is fed into another on a fixed percentage basis.

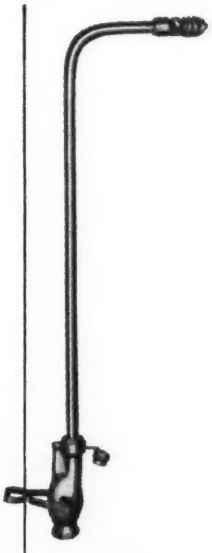


* **Rockwood Double Strength FOAM.** Puts out fires in flammable liquids, and in ordinary combustibles, quicker, at lower cost. Three parts FOAM and 97 parts water create a tremendous heat-resistant blanket. Flows freely at —15°F.



* **Rockwood WET.** One part WET mixed with 99 parts water increases water's penetration and extinguishing action. Gives quickest results against deep seated fires. Saves time, water, manpower.

Bayonet Piercing Applicator. Has a hardened steel cutting tool attached to tip, enabling operator to pierce through partitions, into interiors, etc. Discharges low velocity WaterFOG or FogFOAM.



* **Long Extension Applicator.** Discharges low velocity WaterFOG in an umbrella pattern, smothering fire without causing turbulence to flammables. Excellent personnel protection is another advantage.

FF Extension Unit. Shown with Type SG-60 Nozzle. Discharges Rockwood FOAM in a solid stream or as FogFOAM. Wide angle makes it possible to cover large areas at one time.

**NOTE: The products shown here have all been Tested and Listed by Underwriters' Laboratories, Inc.*

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Engineers Water . . . to Cut Fire Losses

ROCKWOOD SPRINKLER COMPANY
Portable Fire Protection Division
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Company_____
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City_____
Zone_____ State_____

YOU'LL WANT THIS NEW BULLETIN . . .

New pictures, diagrams and helpful facts in this bulletin will be of special interest to smaller city, rural and volunteer firemen.

Large illustrations and point-by-point descriptions show exactly how—and why—the Barton-American Front-mounted Pump provides advantages *not available* on other pumps.

By reading it, you can inform yourself—and gain an excellent standard for comparison of pump performance, quality and operating characteristics at the fire.

Write Today for Bulletin 8330-C

AMERICAN-MARSH PUMPS

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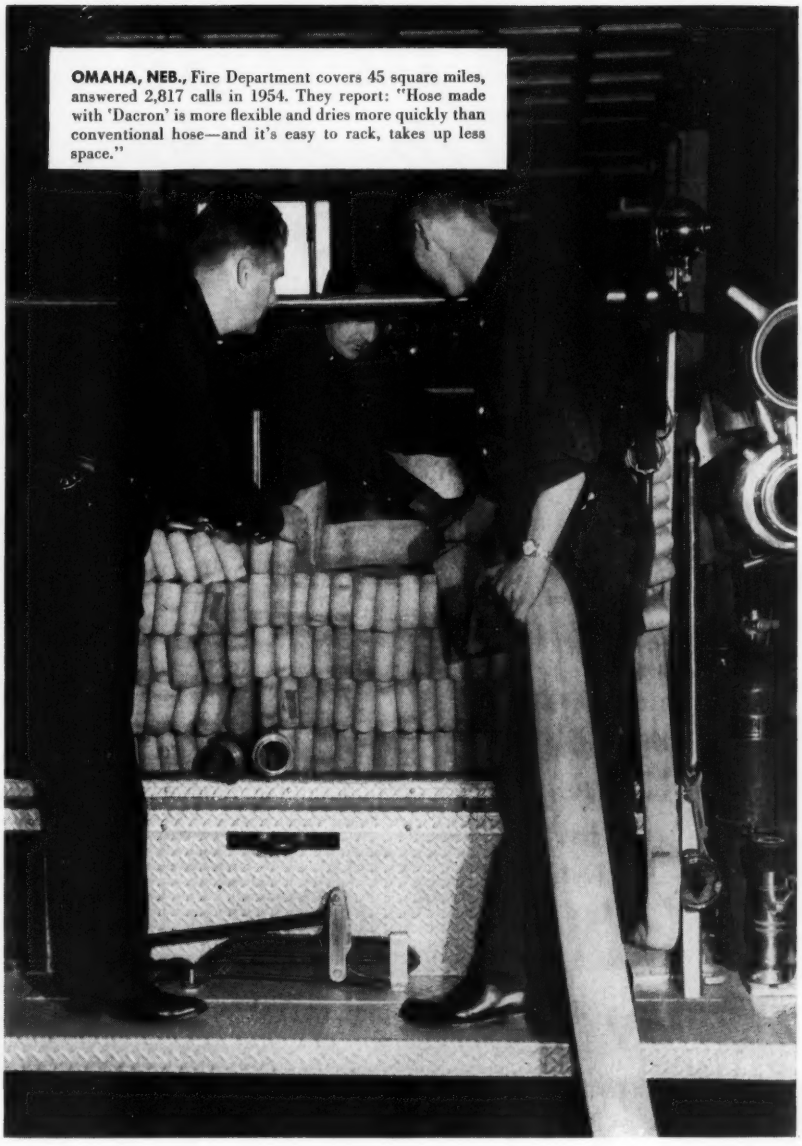
SCHENECTADY, N. Y.—Hose made with "Dacron" is preferred because it gets into action fast . . . gives better all-around performance.

BIRMINGHAM, ALA.—Lightweight, extra-strong hose made with "Dacron" is used because it's easy to handle, easy to carry.

AUGUSTA, GA.—Hose made with "Dacron" is used because it racks and coils in less space. (Hose made with "Dacron" is at left.)



OMAHA, NEB., Fire Department covers 45 square miles, answered 2,817 calls in 1954. They report: "Hose made with 'Dacron' is more flexible and dries more quickly than conventional hose—and it's easy to rack, takes up less space."

Omaha Fire Dept. reports:

"Hose made with DACRON dries quickly, is easy to rack"

REG. U. S. PAT. OFF.

The Omaha Fire Department uses 10,000 feet of hose made with "Dacron"* polyester fiber. Chief Eugene W. Fields reports it gives better all-around performance. Used as the load-carrying "filler" cord that reinforces the hose, this Du Pont fiber makes possible a hose that's light and flexible—yet *stronger* than ordinary hose of the same construction.

Du Pont makes "Dacron" and supplies the yarn to hose manufacturers. The combination of the unusual properties of "Dacron" plus hose manufacturers' skill has resulted in a superior fire hose. Hose made with "Dacron" is made by all leading fire-hose manufacturers. The next time *you* need hose, be sure it's made with "Dacron". E. I. du Pont de Nemours & Co. (Inc.), Wilmington 98, Delaware.

**"Dacron" is Du Pont's registered trademark for its polyester fiber*

ADVANTAGES OF FIRE HOSE MADE WITH "DACRON":

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- Stronger
- Dries faster
- More flexible
- Cuts loading time
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For Better All-Around Performance Specify Hose Made with "Dacron"

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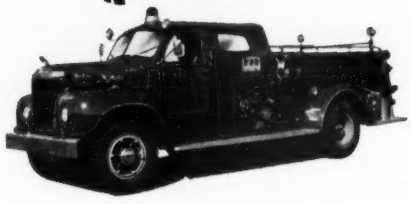
MACKS star in the LONE STAR STATE



Texans boast a well-deserved reputation for demanding—and getting—the best . . . especially where nothing less than the best will do.

That's why so many Texas communities and industries continue to place their faith and their orders on Mack fire apparatus. Mack Fire Apparatus, Plainfield, New Jersey. In Canada: Mack Trucks of Canada, Ltd.

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Millville
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FIRE ENGINEERING

VOL. 109, NO. 7 JULY, 1956

LOCKING BARN DOORS

The clock of history has struck twelve for those Cinderella fairy tale thinkers who would have us prepare our defenses only after an enemy has attacked.

So said Brig. Gen. David Sarnoff, chairman of the National Security Training Commission, in a speech launching Military Reserve Week in April. *In the present era we must have strength in reserve if we are to survive . . . at all,* he added.

The General might well have been speaking about fire defense, as well as adequate military reserves. It is an established fact that the lack of trained reserves has been a recurring problem in American military history; it is equally true in the annals of the nation's fire service.

Every veteran fire fighter knows how difficult it is to maintain a fire department at peak striking as well as defensive strength (even without the added problem of strong reserves) in these budget trimming days. And every one of them knows too, how much easier it is to gain needed facilities immediately after a serious, costly fire.

It's the old story of locking the barn after the horse has been stolen, all over again. And what a pity it is that we must wait for the necessary improvements until tragedy in the form of a conflagration or fatal fire has struck!

Surveys by FIRE ENGINEERING disclose the weaknesses not alone in our first line fire fighting facilities, but in the reserves that sure as fate will be called upon at some time in the history of every community or city. The lack of reserves—men and material—is today particularly serious in our smaller municipalities. As one small town fire chief said, *Reserves?—Hell, all our reserves are right up in our first line!* In other words, there weren't and there aren't any reserves to fall back on.

In most of our cities where working hours of firemen have been reduced and shifts increased in number, the off-tour personnel constitutes a pretty strong reserve. But men, whether reserves or otherwise, cannot fight fire with their bare hands. There is little use calling up reserves if all they've got to work with is a castoff piece of pumping equipment that would be better employed for flushing streets, or dewatering basements, than for front-line fire fighting.

In this connection, it is well to remember that when reserves are needed then is when the heaviest, strongest fire fighting artillery is required. And in an emergency when master streams and appropriate fittings, hose and related appliances are called for to prevent possible annihilation by fire, it is a poor time for reserves to come rolling in with a discarded 250 or 500 gpm pumper of the vintage of 1930, and equally outmoded hose and other appurtenances.

We seem to forget the all-important fact that whatever the size of our city, town, village or fire district, we can experience a peacetime fire that can have all the devastating effect of an enemy inspired disaster. We don't have to wait for the dread hydrogen bomb. We are inclined to completely ignore the lessons of the dear dead days—and the fires that made so many of the dear dead.

We overlook Napoleon's injunction that victories are won by the armies with the most reserves. We miss the fact that while early, prompt and energetic attack is vital in modern fire extinguishment, it is quite conceivable that for reasons beyond the control of the fire fighters, they may be compelled from the moment they are called into action, to wage a defensive battle with their backs to the wall.

Some forethoughtful heads of fire departments are worried about their reserves, and are doing something about them. But they are the exception, not the rule. It would appear to be sound judgment for all those responsible for the nation's fire defense, to give this subject thought—and action.

Roi B. Woolley

Editor

The Lakewood Fire Department rescue boat is a familiar sight on 16-mile long Chautauqua Lake near Jamestown, N. Y. Its operations are generously supported by the residents of the area and over 500 calls for assistance have been answered since it was placed in service. Headlights fore and aft as well as spotlights provide for night operations. The fire alarm telephone number 888 appears on the bow of the speedy craft

MARINE RESCUE SQUADS

Fire Service Small Boat Fleet Fills Big and Growing Need

By DONALD M. O'BRIEN

ONE OF THE MANY extra-curricular services provided by fire departments is water rescue operations. In the broad definition, the work may involve rescue of persons involved in waterway accidents, recovery of bodies in drownings, or relief of flood stricken areas. In many cases the work is performed in cooperation with other public agencies and in the past has even included the military arms of the Federal Government using DUKW's and helicopters.

The need for such activity has grown over many years. In many areas there is no organized service to which people in distress can turn for help. It is natural then that such persons should turn to the organization known to be trained and equipped for other types of emergency work. The fire department in any community thus can expect from time to time to be called upon for assistance in a water accident.

Survey results

It may be true that many departments can hardly expect a single call due to the lack of bodies of water in the immediate area, or because other agencies, such as police or volunteer rescue squads, provide the service for the community. However a survey by FIRE ENGINEERING covering over 1500 fire departments in all population ranges reveals that more than one-quarter of these departments maintain and operate boats for this purpose.

Need for marine equipment

Before fire departments began equipping with boats for water service much dependence was placed upon outside sources, from which craft could be borrowed or commandeered. Even as late as 1956 many towns and villages caught in the maelstrom of floods turned frantically to their neighbors, or to Governmental agencies for these assets of rescue.

Farsighted fire chiefs who could envisage emergencies where boats would come in handy, even if their city, town or village was on only a small pond or creek and they lacked such equipment, found this dependency upon others irksome. It was the cause of much frustration.

The feeling is perhaps best expressed in the words of one chief who reported: *Frequently in the past the men would arrive at the water's edge only to find all available boats already gone to the scene . . . now we have our own equipment and have no need to depend upon borrowed boats.*

The gist of the opinions expressed by many chiefs who reported on the question whether or not they believed boats were a requisite apparently attests their value when owned, maintained and operated by the fire service. It is true that considerable time may elapse without calls for such equipment, but when the need arises, having the boats immediately available is a priceless asset.

This fact was epitomized by scores of fire departments during the 1955-56 floods in the east and west. Many a community that had no boat and never thought it would need one, was forced to seek such means of rescue from outside sources. And all too often these outside sources could not spare their facilities because they also required them.

Types of boats preferred

The majority of boats reported by respondents to the survey questionnaire, were of modern metal construction. Aluminum was preferred although steel,

including stainless steel, was a popular second choice.

This type of construction lends itself ideally to the requirements of fire and rescue services. Kept in reserve, but always ready for use, at strategic points, such craft can be quickly dispatched on a trailer, or mounted on fire apparatus or other special rigs fitted to transport it.

Because of its light weight, the metal boat can easily be handled by a small crew, a real advantage in these days of reduced manpower in the fire service. Their construction with air compartments makes them practically unsinkable. The normal maintenance required for standard planked wood boats is not required. Caulking, scraping and painting, or soaking, is eliminated and where a trailer is not provided for hauling, the boats can be stowed overhead in apparatus quarters with no danger of drying out from the ceiling or other heat.

Next in choice to the metal types were moulded plywood boats possessing practically the same advantages as the metal craft. A few boats were reported built of moulded glass fibre. An unheralded newcomer to the field is a type of plastic boat. One canvas boat was reported by Chief F. C. Richter of Batavia, Ill.

Boat sizes most prevalent

The size most frequently reported was 14 feet in length. Next in popularity was the 16-footer and scattered throughout the returns were 12-foot, 18-foot and a few smaller dinghys.

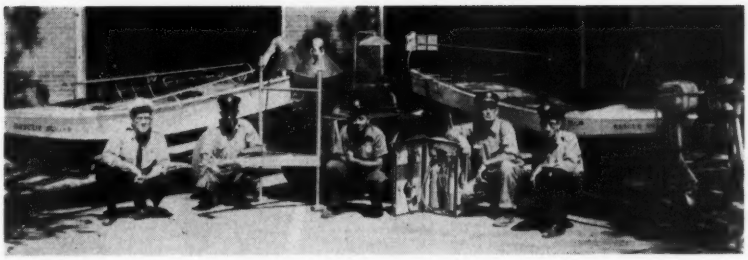
Departments operating inboard boats reported sizes ranging from 17 feet to over 40 feet in length. The St. Paul Park, Minn., Fire Department reported that in addition to the 17-foot steel hull inboard runabout, they also had on hand a seven-man rubber life raft propelled by an outboard motor.

Outboard motors popular

As was to be expected, the investigation disclosed the fact that the majority of emergency craft possessed by fire departments and rescue services are powered. Oars are considered poor propulsion, particularly where the area of the water is extensive. However, oars are carried by the great majority for use in the event of a breakdown, or in places not feasible for propeller propulsion and where certain types of dragging operations may be required. One department reported that oars were fixed to locks and could not be removed. This precaution prevents their loss in the event of upset.

While some departments use inboard motors, most boat users place their dependence on the popular outboard motor. These handy power units have been greatly refined and improved within the past two or three years. Today they provide greater horsepower per pound of weight than was formerly believed possible by many.

The power preference varies somewhat, according to those reporting, but the 5- and 7½-horsepower motors are the most widely used. Ten-, 15- and 25-horsepower motors are evidently much in



The Rescue Squad of the Rocky Ford, Colo., Fire Department has been widely acclaimed for its efforts. Two 14-foot wood boats are transported by trailers and powered by outboard motors. A water scope, resuscitator, walkie-talkies, sled drags and other miscellaneous items of rescue equipment are carried. Chief Shuey states that the sled drags are very efficient in the man-made reservoirs and lakes of his area. Made of ½-inch pipe up to eight feet in width, they are designed to ride over moss and debris and yet catch onto a body. The trailer-mounted lighting plant has been very helpful for night operations. Shown in the photograph are Chief Jim Shuey, Asst. Chief Pat Smith and Drivers Earl Smith, Frank Wells and Leo White

During the 1956 Allegheny River flood firemen of Salamanca, N. Y., operated boats directly out of their fire station. When the river overflowed its banks the fire trucks were moved to high ground and boats were floated right in the stations ready to answer alarms of fire or emergency calls

Council Bluffs, Iowa, firemen using their resuscitator equipment following a boat rescue. Operating on the Missouri River and Lake Manawa, the department finds their 16-foot wooden boat powered by a 10 hp outboard motor a highly essential piece of equipment. Chief Waldo Merrill says this unit and crew are an excellent public relations builder

Fremont, Neb., fire fighters find nets invaluable for body recovery work. Woven for the department by a Missouri River fisherman, they range in length up to 100 feet. In addition, the standard type of drag or grapple is used by the department

Auburn, N. Y., firemen using their boat to recover one of three boys drowned in an abandoned quarry. Assistant Electrician Charles Conboy steadies the craft with a pike pole as Lieutenant Bernard Searing and Fireman Frank Fiore pull the body aboard. Later Lieutenants Searing and McKeon were hospitalized when it became necessary to enter the sludge-filled water in a 12 degrees above zero temperature to release the bodies of the other victims that were snagged on the bottom—*Auburn Citizen-Advertiser Photo*

Portland, Me., firemen launch their rescue boat using the trailer as a dolly. Due to erratic shoreline of the area the Fire Department maintains several launching points which are given periodic checks to make sure that operations will not be hampered

demand. A few 2½- and 3-horsepower models were mentioned but the tendency is toward the more powerful types. Selection of propulsion equipment also depends upon the nature of the rescue or other emergency work to be done. It is generally agreed that the power plant should be as light in weight and as powerful as necessary for driving the craft over the water with good speed, or bucking strong currents. It should be readily attachable and detachable, easy and sure starting and sturdy. Naturally it is desired that it be economical of fuel, easily lubricated and, according to some, easy to throttle down.

An interesting observation on the use of mechanically powered boats is offered by Veteran Fire Chief Barney Houston of Cincinnati, where flood operations are nothing new to the fire department. He states: *We do not have use for more powerful motors because of operating them through flooded streets where buildings have been vacated. If too much wake is formed, glass windows can be broken and turbulence set up inside a building, upsetting stock and in severe cases, causing weakened walls to collapse.* This particular viewpoint should not be overlooked by those departments who are called upon for flood relief work.

One other point stressed by another fire officer was the wisdom of having some hookup by chain or tackle so that should by any chance the fastening of the outboard engine give way, the motor would not be lost overboard.

Minor equipment carried

Practically all departments equipped with boats carry some form of oxygen breathing equipment or resuscitators. Other equipment varies according to the normal or special rescue or other emergency work to be done, or to departmental preference. Naturally, the size and type of boat and its power plant, if any, have a bearing upon the cargo stowed in it.

Stowage of respiratory protective and other equipment presents something of a problem, particularly in smaller craft. Considerable ingenuity is displayed by many boat users in this detail. Gear must be stowed out of the way of personnel, yet ready at hand. It must not overload the craft and it should be so located and fastened that it withstands rough handling of the boat, even capsizement.

In many cases, large units such as resuscitators and the like are stowed in the boat itself although a general practice, according to reports, is to dispatch such equipment either on a land unit that responds with the boat or is sent on "special call" to the scene. According to respondents to the inquiry and information gathered from other sources, the use of resuscitators and inhalators is very successful if the department is notified quickly and responds promptly. Certain operations such as locating drowned persons do not call for the same speed in getting to work and under these conditions all but essential gear may be removed from the boat to facilitate the operation.

Shallow water diving equipment

A number of departments reported the use of equipment designed for shallow water diving. With this gear, trained firemen can enter the water and search for victims who may be snagged on the bottom before dragging operations are begun. Experiments were conducted by many departments shortly after World War II, using standard self-contained demand type breathing equipment for underwater work. Some departments report such equipment used in emergencies, but most of them agree that such operations call for the exercise of great care and direction. Furthermore, it is essential that participants in these operations be thoroughly schooled in the limitations and use of the apparatus.

The more recent advent of skin diving has led to improvements in breathing equipment designed for underwater purposes and in some localities, this has replaced the use of improvised diving gear. Several departments reported that skin diving equipment is now standard for their marine craft. Bellmore, N. J., reported the use of immersion suits in addition to the breathing equipment.

Additional rescue equipment reported includes life jackets and/or Mae Wests (considered musts by many), floats, life rings, ropes, grappling gear and line-throwing guns. This last item of equipment, once standard on all city ladder trucks, is apparently again finding a place with rescue boats.

Recovery equipment, consisting of some form of "drags" with hooks for bottom grappling are part of nearly all boat kits. Usually of homemade variety, they are designed for the needs of the area in which the operations are carried on.

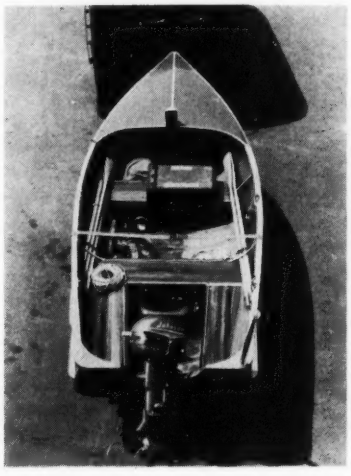
The Fremont, Neb., Fire Department in addition, uses nets for this task. Made in sections up to 100 feet in length, with a depth of six feet and a mesh of six inches, the nets are fitted with wood floats at the top and lead weights at the bottom. Fire Chief J. H. Mordhorst reports that his department has had good success with them in the many gravel pit lakes in his area.

Another essential in boat accessories is suitable lighting equipment. Lighting for night operations has mainly been improvised from standard fire department equipment. The portable generator and lights (including spots and floods) are in many cases pressed into service aboard the boats to supplement hand lights. Where the heavy lighting sets are inadvisable for boat use, they may be brought up on land vehicles, or even a second boat utilized exclusively for them. All boats, however, should be equipped with at least hand lights, and signalling devices. A few reporting departments mentioned special underwater lights and such products are now being manufactured (for one such installation see "Short Cuts and Gadgets" in this issue.)

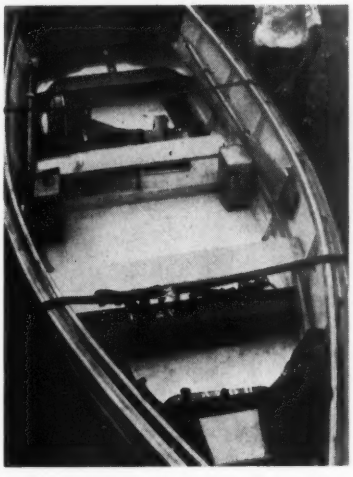
"Marine Rescue Squad"

Many departments operate more elaborate boats equipped with inboard motors

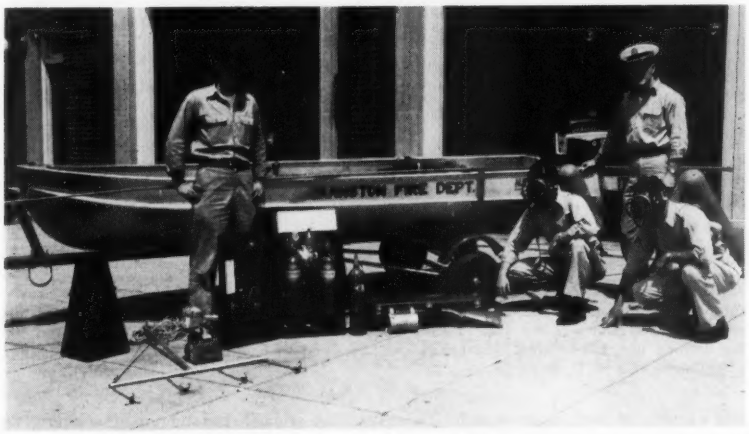
Although far inland, the Sedgwick County, Kans., Fire Department, operates a well equipped rescue squad. Included in the equipment are drags, resuscitator, aqua-lung, portable generator, lights and small tools. The boat is powered with a 25 hp outboard motor



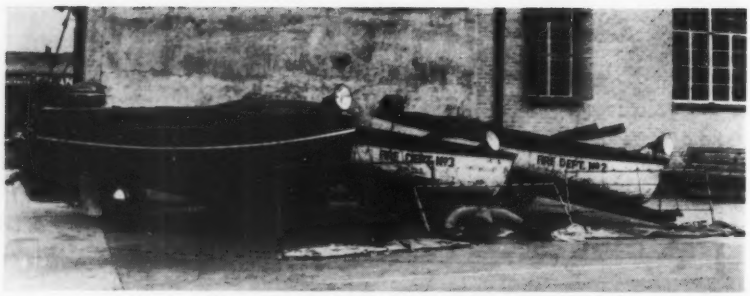
The Portland, Me., Fire Department boasts this 15-foot aluminum rescue boat with a six-foot beam. It is equipped with a 10 hp outboard motor, vest-type life jackets, spot light, resuscitator, two sets of oars, boat hook and assorted hand tools. The rescue truck that tows it can be converted to an ambulance when necessary



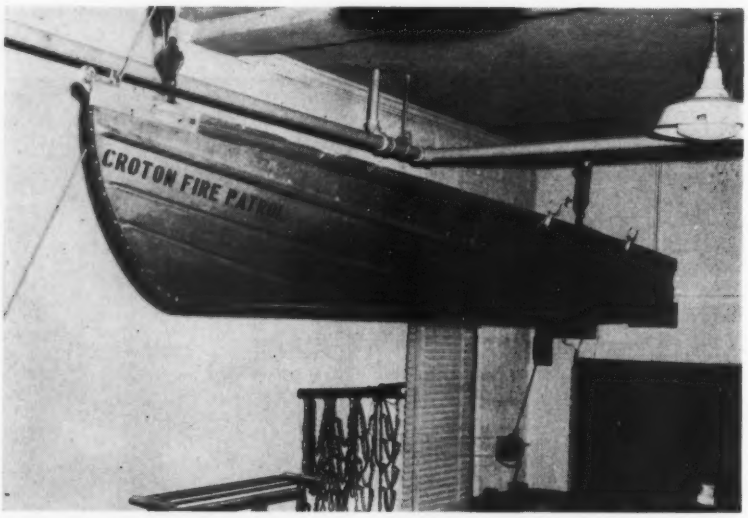
Equipment stowage in rescue boat of Community Fire Company, Bowleys Quarters, Md. Four life jackets, first aid kit, anchor with 100 feet of rope, grappling drag sections, oars, buoys, extra gasoline and a 12 hp outboard motor are neatly secured in position ready for instant use. The 16-foot boat is mounted on a trailer for quick response



The Cranston, R. I., Fire Department rescue boat is equipped with a 7½ hp outboard motor, grappling irons, water scope, handlight, line-throwing gun, resuscitator, telescoping 25-foot glass pole and two underwater units. When the diving equipment is used two men always work together for greater safety. Over 75% of this department has qualified in the use of this equipment. Shown with the craft are Lt. L. E. Caron and Privates R. S. Jones, R. H. Blinkhorn and G. D. Thomson



The Austin, Tex., Fire Department operates three boats for water rescue. The 16-foot laminated plywood boat is powered by a 25 hp outboard motor and is used primarily on the lakes nearby. The 14-foot and 16-foot metal boats are intended for Colorado River work and are powered by 5 hp outboards



The Croton-on-the-Hudson, N. Y., Fire Department uses the ceiling hoist method for stowing their 14-foot aluminum boat. It is quickly lowered to the apparatus underneath and trucked where needed. Hanging on the fire station wall is a tire-chain type of drag employed by this department

The Marietta, Ohio, Fire Department "John boat" carries life jackets and rings, rope, resuscitator, inhalator and drags. Situated on the Ohio and Muskingham rivers, some part of the city is flooded nearly every year. During flood conditions the portable pump is carried for fire fighting use. Shown with their handy unit are Chief D. E. Drennan, Firemen C. E. Young, L. D. Conner and W. D. Eagleson

and capable of high water speeds. These craft and crews in effect can be considered as Marine Rescue Squads since they go far beyond the facilities of the average fire department. An outstanding example of this type is the Lakewood, N. Y. Fire Department.

A special V-8 engine developing 207 hp drives the 26 foot boat over the water at better than 40 miles per hour. Built to the Fire Department specifications at a cost of over $3,800 only specially trained firemen are permitted to operate it.

With its crew of five men it is available on call for any point on Chautauqua lake, a popular summer resort and "muskie" fishing area. It is equipped with a resuscitator, grappling hooks, wool blankets, life jackets, burn and first aid kits, fire extinguishers, and other miscellaneous rescue equipment. A 60 watt mobile radio unit operates on the Chautauqua County Fire Radio net.

The Fire Department always dispatches its rescue truck to the nearest point on land and establishes ship-to-shore communications by radio. The truck is completely equipped for handling any emergency, and in addition carries a relief crew for the boat in case prolonged operations are necessary.

The Lakewood Fire Department owns and maintains its own boat house for storing the marine equipment. Three blocks from Fire Headquarters, it is equipped with traveling chain hoists for removing the boat from the water for repairs or for winter storage.

In addition to the large speed rescue boat a 14 foot aluminum row boat is also maintained. This is suspended from the ceiling at fire headquarters, and can be lowered on to the rescue truck if an emergency arises where the water is too shallow for operation of the large boat. It is also available on mutual aid if the emergency is in an area outside the district.

Radio vital for communications

Passing orders and information between boats and/or the shore, has been a time-consuming process in the past. Signals were improvised for arm and hand, or flags during daylight hours, and blinking lights during periods of darkness. Frequently such signals were misunderstood and delay and confusion resulted. As radio grew in importance for everyday fire ground operations, chiefs who employed it found it the answer to communication problems in water rescue and dragging. Many departments reported the use of portable transmitter-receiver (walkie-talkie) units in their work and some emphasized that radio was a standard piece of equipment on their boats. Where the craft are accompanied by a land rescue unit that is radio equipped, the shore-based vehicle becomes a command and information post. Many of the more elaborate inboard motor boats have a standard mobile radio unit installed.

Boat rescue training essential

At a casual glance it may appear that water rescue is an on-the-spot improvision. However, most departments have operational plans for water emergencies. The normal rescue and first aid training given in all departments helps prepare the men for emergency boat work. As in other types of fire training, confidence in methods and equipment is acquired by frequent drill.

The Hingham, Mass., Fire Department covers 17 miles of waterfront in addition to numerous fresh water ponds. Chief A. W. Kimball has this to say: *I strongly feel that any department that has a body*

of water within its confines should have a boat and men properly trained in rescue work. We take our men down to the harbor in the warm weather, put them in the boat with old clothes on, make them jump overboard and get back in again. Also one man goes in the water in the same manner and is rescued by two men in the boat. It's good training and even fun for the men.

Most departments require that men assigned to this service be accomplished swimmers and swimming qualifications are checked on an annual basis. Where diving apparatus is in use, all men are given competent instruction in its operation and then drilled frequently.

Flood operations

Fire departments stationed along the large rivers and seashores of the country have a wealth of experience in water emergency operations. Year after year they have been faced with the problem not only in relief of victims, but fire fighting as well. The Cincinnati, Ohio, Fire Department maintains a fleet of 21 row boats of various sizes. Of these, 12 are light metal skiffs which can be quickly placed aboard fire apparatus and rapidly transported to the scene. Six wooden boats of heavy construction are used for patrol duty and laying hose lines. These boats are transported to specific locations during floods and remain there fully manned for the duration of the emergency. The remaining three are a popular river-style rowboat known as the "John Boat." The welded steel boats are 16 feet long and are easily handled by two men. A transom board is provided for outboard motor use. Cincinnati also maintains two DUKW's, or "ducks", purchased from surplus following World War II. These have been remodeled and altered by the department maintenance division to fit the requirements of rescue and fire fighting. A 500 gpm skid mounted pump powered by a six-cylinder engine was mounted and a permanent suction connection made through the hull at a point directly behind the left front wheel. This helps prevent clogging from flood debris. No strainers are used on the underwater ports, because it would be difficult to clean them while in service. Instead, a special, quickly detachable suction strainer is mounted at the pump.

Both ducks are fitted with radio equipment that combines a power amplifier in the transmitter-receiver package. These communications units are very valuable in giving public directions during operations. The loudspeakers have an estimated range of over a quarter of a mile.

Bilge pumps are standard equipment on the ducks and are capable of keeping them afloat with a four-inch hole in the hull. This is a distinct advantage when working in fast-moving flood waters where sunken logs and other swift-moving debris constitutes a serious hazard.

The strategy of employment is to drive them overland to a point near the emergency. Entry to the water is then gained at some convenient point and speeds up to eight miles per hour may be maintained. Land speed of the vehicles is over 50 miles per hour. The ducks are capable of operating over any type of terrain and have proved especially valuable in flooded areas of farms. Plowed land under two feet of water, an obstacle to other type boats or men attempting to wade through, is easily traversed by the duck.

The Waukegan, Ill., Fire Department operates a 40 foot, radio equipped patrol boat. The former Navy sea rescue craft is powered by twin diesel engines and carries resuscitator, first-aid kit, blankets, stretchers and grappling hooks. A portable 500 gpm pump enables it to double as a fire boat—*Waukegan News Sun Photo*

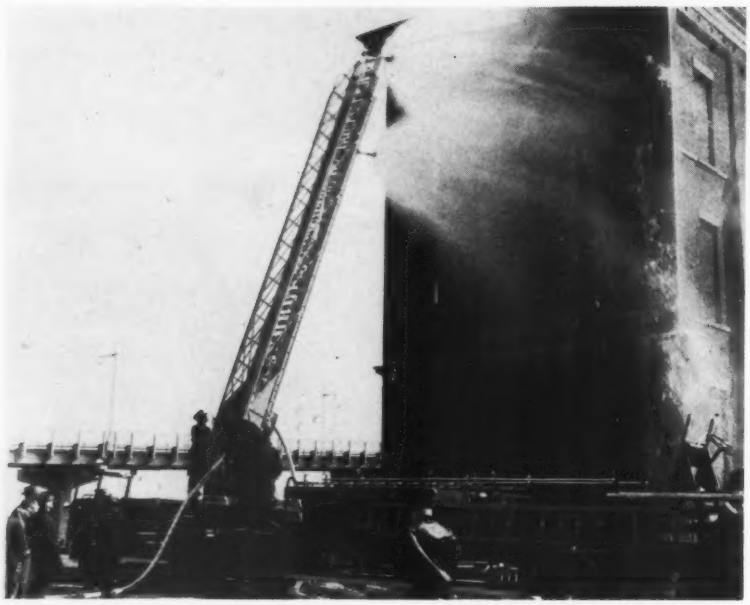
The Arbutus Fire Department, Baltimore County, Md., carries their "pram" on the new floodlight and rescue truck. Equipment includes a three-section drag which can be assembled on the scene and Mae West life vests for the crew

The Cincinnati, Ohio, Fire Department "ducks" double as rescue and fire fighting units. Fore and aft mounted turret nozzles with 1¼-inch tips can be used to propel and maneuver the craft by directing the streams downward into the water. This unit is discharging over 700 gpm

Transporting boats

A great number of departments mount their small boats on trailers designed for the purpose. Completely equipped, the boat is housed in its quarters ready to be

Continued on page 612



Covering exposures using two ladder pipes and JN-200 nozzles. Combined main and intermediate nozzles discharge over 1500 gpm at 115 psi—90 degree fog pattern

A Special Fire Engineering Report:

New York Plans Replacing Old Water Towers With "Aerial Towers"

Legendary Apparatus to Be Retired in Favor of Converted Modern Metal Ladders for Greater Efficiency, Flexibility, Economy

NEW YORK is not the first city to put its water towers in moth balls, but it is the first to deliberately set about converting the modern metal aerial ladder into an effective water tower.

The decision was reached by Fire Commissioner Edward F. Cavanagh Jr. and Chief of Department Edward Connors after long deliberation, which culminated in a series of tests on March 27 last on Welfare Island, conducted by Acting Battalion Chief Harry M. Irwin, Chief Supervising Engineer, Division of Fire Fighting Equipment and his aides, Lieutenants Ryan, Clements and Clark, Supervising Engineers; Shop Foreman Tom Brown, and others. Attending observers at these tests in addition to the Commissioner and Chief of Department, were many top officers of the department, including Deputy Chiefs-in-Charge Burke, Petronelli, Denahan, Massett, Ryan, Knockenhauser, Holian, O'Brien; Deputy Chief Wright and Inspector John Cavanagh of the N. Y. Fire Patrol; Lieutenant Harmatuk, for communications, and Lieutenant Ray Helriegel for photography. A number of out-of-town observers also witnessed the tests, including Fire Commissioner Paxton Mendelssohn of Detroit. Also present were Hon. Battalion Chief Clarence Meek, Librarian of the Fire College, whose story of the tryout of aerial water tower apparatus is being published simultaneously with this article, in the Department's own excellent organ, "WNYF", and the editor of Fire Engineering.

The problem of replacement of overage and antiquated water towers has been of concern to the New York department for some time. Five of the seven towers on the apparatus register date from the days of the horses and, measured by presentday standards are obsolete.

To replace them would cost prohibitively; no apparatus manufacturer today is producing them, nor do they particularly desire the business. One manufacturer's representative told Fire Engineering that to manufacture a conventional type water tower would cost a minimum of $100,000.

Improvement made in aerials

While practically no improvements have been made in water towers in the past several decades, aerial ladder apparatus, on the other hand, has been steadily improved since the advent of the mechanically operated metal aerial type.

Pursuing its policy of trial and error, the New York Fire Department in 1948 installed three metal aerials, one each of American LaFrance, Peter Pirsch and Seagrave, in Ladder Companies 4, and 24, Manhattan, and 110, Brooklyn, respectively. The operation and performance of these units were watched and evaluated, although it was not then contemplated that they might or would ever serve as water towers. As a result of their performance, some 24 additional metal aerial ladders were added prior to the year 1956.

As part of its program of progressive replacement of apparatus, the 1955-56 budget of the Department contained provision for 11 more tractor-drawn ladder trucks with 85-foot, three-section metal-alloy ladders. While these units were being built, investigation of the possibilities of using the metal aerials as water towers was carried out, and this resulted in the designing and construction of a water tower attachment consisting of fixed piping and siamese, gauge and control valve, and permanently attached ladder pipe.

Initial tests determined the practicability of this tower attachment and it was decided to equip five of the new units with the permanently attached piping and nozzle and to provide all of the trucks with demountable ladder pipe assemblies which could be used on the top or intermediate sections of the ladder, the two assemblies to be independent of each other and capable of being operated either separately or simultaneously.

These preliminary tests showed what was later proved at the Welfare Island trials, that the dual ladder pipe attachments would provide water tower operations of greater flexibility and speed, and increased range, when compared with the present water tower apparatus. The experiments also demonstrated the belief held by Commissioner Cavanagh and Chief Connors, and many of the aides, that the utilization of these "aerial towers" with large volume water fog, as well as heavy-duty master streams, might open up an entirely new field of fire attack and defense techniques. This be-

lief was crystalized in the large scale tests held last March and described herein.

Old fire station, proving ground

Proving ground for the Welfare Island tests was the abandoned three-story former fire station of Engine 49. One of the latest type American-LaFrance 85-foot aerials was selected for the experiments and fitted with two ladder pipes, one permanently affixed to the underside of the bed ladder (32 feet from ground level when raised), and a portable ladder pipe which can be attached when required, usually to the fly ladder. These pipes were fitted with Elkhart Jumbo JN-200 combination fog and solid stream nozzles. The bed ladder assembly (Fig. 2) is supplied through a 3-inch fixed pipe short section and 3-inch CRL hose, with a fixed siamese, gauge and control valve at turntable level.

The demountable ladder pipe for use on fly or intermediate sections weighs 29 pounds and is normally carried on the running board of the apparatus. The pipe is quickly attached before elevation of the ladder by clamping on the two top rungs of the section by simple movement of one lever after the ladder has been raised sufficiently to clear the tiller windshield. The feeder line is then laid on the ladder, attached to the pipe and secured by ladder straps, and the ladder elevated and extended to the desired position.

Remote control of the vertical movement of pipes is provided by ropes attached by snap hooks to eyelets on the pipe handle and pipe. Pipes may be moved vertically and laterally 15 degrees to each side, by manual control from the ladder if desired. With remote control of pipes, lateral movement is secured by rotation of the turntable.

With the ladder pipe in use as a water tower, the aerial ladder is in cantilever position, the ladder being supported at the base and not against any structure. The reaction of a stream tends to push the ladder backward and will range from 210 pounds with 1¼-inch tip and 90 psi pressure, to 413 pounds with 1¾-inch tip at the same pressure. The force of gravity tending to lower the ladder is offset in varying degree by the back pressure and at an 80-degree angle the reaction from the two ladder pipes approximates the opposing gravity pull. As is shown by the chart (Fig. 1) the 70-degree and 80-degree angle is recommended for maximum stability with the longest extensions and larger tips, on the one side providing safety margin against backward overturn in case of excessive pressure, and on the other side, guarding against unbalance downward if reaction pressure is lost through any mishap.

The tests, several of which are illustrated herein, ran the entire gamut from straight stream, single and dual operation, to different fog patterns, from zero to wide-open umbrella pattern, which completely blanketed the 35-foot facade of the old fire house. They also disclosed that a nozzle with 1⅜-inch tip at the top of the fly-ladder, 75 feet high, discharged approximately 600 gpm at 115 psi with 200 pounds on the pumper. The intermediate jet at the top of the bed ladder, with a 1¾-inch tip showed a discharge of about 1000 gpm at 115 psi on the tip, at an elevation of 32 feet.

Continued on page 613

TABLE OF PRESSURES

The figures below are for the recommended nozzle pressure of 90 psi. The maximum pressure at the siamese gauge should not exceed that listed for the particular situation.

Height From Ground (Feet)	Nozzle Size (Inches)	Friction Loss (Lbs. Per Sq. In.) Ladder Pipe and Nozzle	Hose	Head Loss	GPM	(Lbs) Reaction	Siamese Gauge
70	1 1/4	14	16	30	438	210	150
70	1 1/2	27	34	30	633	303	181
65	1 1/4	14	16	28	438	210	148
65	1 1/2	27	34	28	633	303	179
65	1 3/4	54	58	28	862	413	230
32	1 1/4	14	4	12	438	210	120
32	1 1/2	27	8	12	633	303	137
32	1 3/4	54	15	12	862	413	171

(Note: Calculate height of siamese to pipe 25 feet for friction loss.)
Jumbo Nozzle Fog (JN-200) discharge approximates that of 1¾-inch nozzle at 90 psi.

85-Foot Aerial Ladder Used as Water Tower

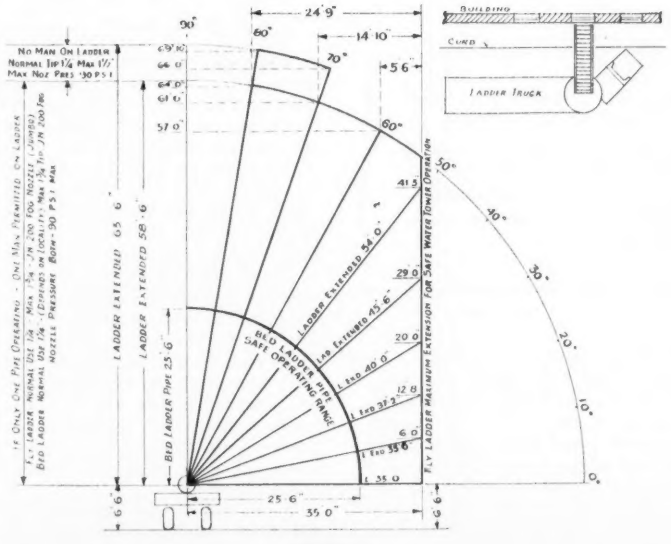


FIGURE 1

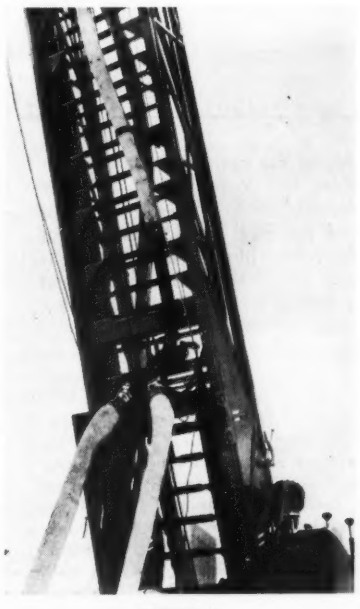


FIGURE 2

Multiple streams are used in attack on stubborn fire which burned out of control for five hours. The firemen were injured on the stairs at the right
—photo by H. L. Reibscheid

Concealed Spaces Contribute to Costly Colorado Springs Fire

By LESTER L. WILLIAMS, M.D.

About the author: *Lester L. Williams is a doctor by vocation and by avocation, a dyed-in-the-turnout fire buff. Like a number of his fellow physicians, he can usually be found in the smoke and scorch of every worker in his city, treating fire fighters who have been injured in line of duty. In addition, Dr. Williams is a good reporter, as this blow-by-blow account of the recent costly blaze in Colorado Springs' high value district attests.*

AT 11:07 P.M., on Tuesday evening, April 10, 1956, the Colorado Springs Fire Department received a report of smoke in the Peak Theatre, located at 115 East Pikes Peak Avenue, in the heart of the high value district. A full first alarm response was dispatched, which included Engines 1, 2, and 4 and Aerial 1, with Assistant Chief O. L. Dutcher in charge. In addition, Fred Lauch, chief of the department, responded.

When these companies arrived, fire in the projection booth of the theatre was considered the most likely possibility. Engine 1 took the hydrant at the northwest corner of Pikes Peak and Nevada, (see diagram) and laid a 2½-inch line to the front of the theatre. This line was connected to the pump as a supply line, then a line of preconnected 1½ inch hose was taken through the front entrance into the theater, the crew taking with them a pump can and a carbon dioxide extinguisher. They found one room on the west side of the second floor of the theater heavily charged with dense, grayish-yellow wood smoke, but the source of the smoke was not apparent; certainly it did not originate within the theater building.

Two fans were placed to clear some of the smoke from the theater, and the search for the fire was expanded. No fire showed in any of the adjacent store fronts, but a faint cloud of smoke could be seen coming from the second story windows immediately west of the theater building. The crew of Engine 3 carefully removed the door from the stairway at 107½ East Pikes Peak Avenue, and when entrance was made, considerable smoke was encountered in the upstairs hall; smoke also was seen issuing from behind the top riser of the stairs, indicating a source of fire somewhere beneath the second story floor.

Sparks were seen falling from the ceiling of the Shoe Circle, next to the theatre at 111 E. Pikes Peak. Six-inch soft suction had been used to connect Engine 1 to a high flow hydrant in front of the

Fireman James DeMark receives first aid from the author shortly after sustaining injuries in smoke explosion—*photo by Ed Welter*

Peak Theater, and now a line of 2½-inch hose was taken to the front of the shoe store, the glass broken out of the door, and entrance made. Extensive fire was found above the false ceiling of this store, so pike poles were used to pull down some ceiling and the fire hit with fog from the 2½-inch line. Coincidentally, salvage covers were spread to protect the goods in counters within the store.

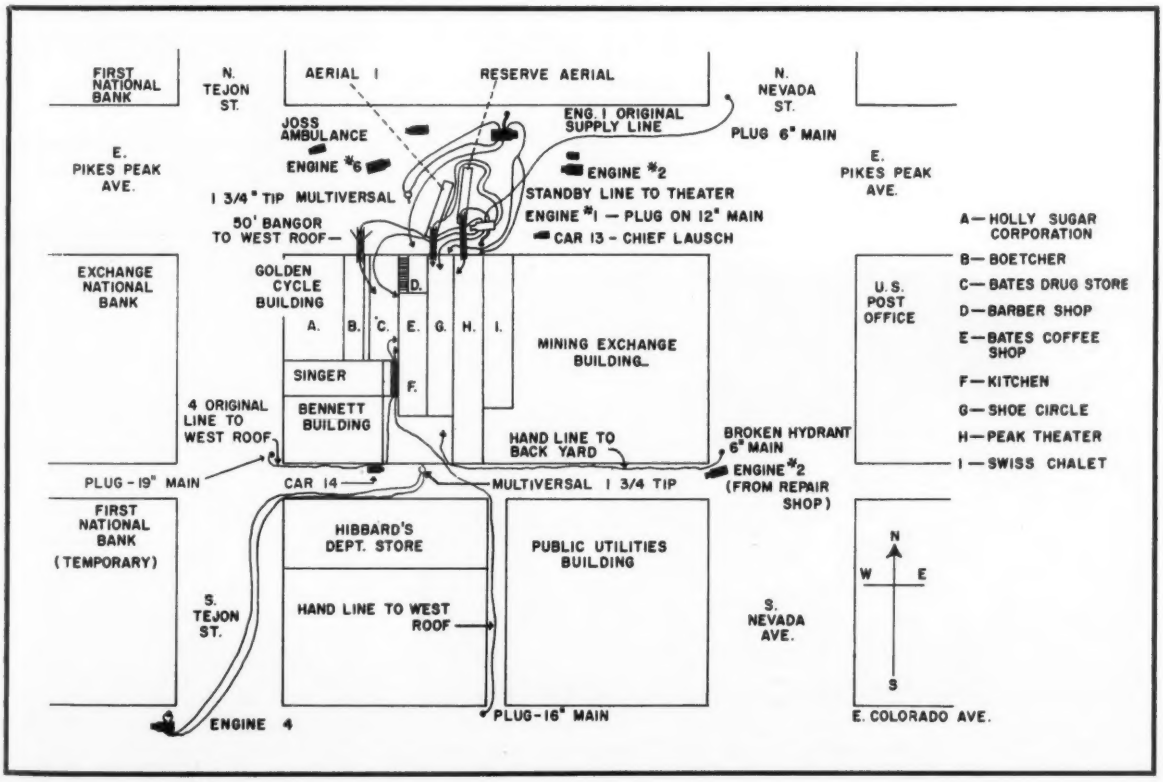
It is customary for the second due company to cover the rear of the fire, so Engine 4 took a line from a hydrant on Tejon Street and stretched it down the alley. When fire was discovered in the store this line was taken up a fire escape to the second floor level, then up a vertical wooden ladder to the roof of the involved building. An attempt was made to remove two skylights to ventilate, but they were anchored securely, so small panels were knocked out to release some smoke and efforts to remove the skylights continued.

A line of 1½-inch and one of 2½-inch were taken up the stairs at 107½ E. Pikes Peak, the top riser of the stairs was cut out, releasing considerable smoke and the 2½-inch line was operated intermittently through this opening. A fireman wearing a self-contained mask, commenced cutting a sizeable hole in the floor of the hall about eight beyond the head of the stairs, to gain adequate ventilation. Since no flame was encountered, the 1½-inch line was backed down the stairs and a fog pattern operated in the shoe store through the holes cut in the false ceiling.

At this stage everything pointed to an extensive, deep seated fire in a building in the middle of a densely built up block, so the chief prepared for a tough battle. Engine 1 was already spotted in an ideal location, with excellent water supply from a large main. Engine 2, which had made a move-up to fill in at No. 1 station on the initial alarm, was called to the fire at 11:35 P.M. and two minutes later the chief used the two-way radio to summon all off-shift men to report for duty. The aerial was spotted in front of the fire building, the big stick raised to the roof, and a line from Engine 1 taken up it.

Explosion spreads fire

About midnight a smoke explosion occurred, blowing from the space under the second story floor into the second story hall and down the stairs at 107½ East Pikes Peak. This blast hurled the men working at the head of the stairs down to the street. Those involved were James DeMark, who was attempting to ventilate, and Howard Gosnell, Red Davids, and Patrolman Dick Boatright, who were operating the 2½-inch line through the top riser. Boatright had served in the fire department for several years, then transferred to the police force, but when this occurred he borrowed fire clothes and went to the aid of the fire department. Gosnell, Davids, and Boatright all received first and second degree burns on their faces and hands. DeMark's mask protected his face, but his ears were burned, and he was violently hurled down the stairs sustaining many bruises and a badly sprained knee. Dr. James Wambach, a dentist, was on the stairs at the time attempting to get in to his office to remove valuables, and he too received first and second degree burns on his hands and face. The firemen were given first aid, then sent to the hospital by ambulance. None suffered from burned respiratory passages. The last of the five was discharged from the



Left: Operations at front of fire shortly after smoke explosion. Chief Lausch in white helmet directs the battle

Right: Fire burns stubbornly despite deluge of water. Here flames show above the parapet despite attack by many streams—*photos by Stan Payne*

hospital four days later, and all were thankful their injuries were no worse.

The explosion ripped off the skylights and effectively vented the upstairs hall. The lines on the roof were shifted to adjacent roofs and operated from there.

The explosion and evacuation of the stairway occurred so rapidly that none of the men on the stairs is entirely clear on the sequence of events. All the men involved have been questioned and give the following stories. DeMark, who was in the second story hall, was blown down the stairs and on to the sidewalk. He remembers nothing from the time of the explosion until he was being loaded into the ambulance. Gosnell was at the nozzle. He recalls that they have operated the line through the top riser for a time, that no flame was seen and but little smoke was coming through. He decided they were accomplishing nothing so the line was shut down preparatory to moving it to the hole DeMark was cutting. Immediately the line was shut down heavy dense black smoke poured out of the hole and in a second or two the explosion occurred. He threw up his arm to shield his face, turned and tried to get down the stairs. The force of the blast was such that he touched but few steps in the descent.

"Red" Davids was with Gosnell at the nozzle. He noted that while the second story of the building was full of smoke, they were working in fairly clear air at the head of the stairs. Rather suddenly the smoke seemed to come down to engulf them. Davids' first thought was that the ceiling had come down behind them, and he turned to look down the stairs. At that instant the explosion occurred, and bowled him down the stairs, end over end.

Boatright, the misplaced policeman, recollects that suddenly everything became dark, then the explosion occurred. His first thought was that the roof had fallen and that they were trapped. This fear was heightened by some falling debris. In going down the stairs he remembers touching only one step.

The writer too, was on the stairs when the explosion occurred, making a circuit of the fire fighting operations to observe the attack on all different fronts. I had been at the top of the stairs and had started back down. I did not observe any sucking in or sudden calm as is sometimes described before a backdraft. I had noticed hot smoke pouring out from the

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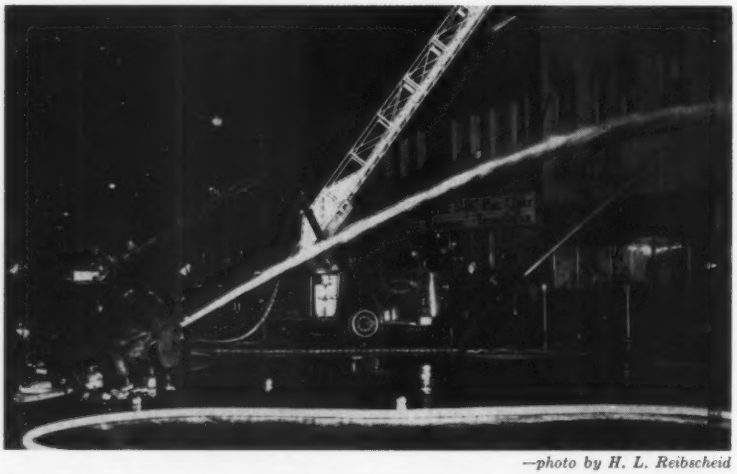

—*photo by H. L. Reibscheid*

Operations at front of burning building. The Shoe Circle is noted at the right, and is marked by a large sign. The two aerials are in use. On the left a crew shifts the deluge set

OVERHAUL AND SALVAGE . . . IN THEORY AND PRACTICE

By ROI B. WOOLLEY

PART XV (Continued)

Folding Salvage Covers— The Accordion, Two-Man Or Underwriters' Fold and Donut Roll

THE PRECEDING INSTALLMENT carried descriptions of and instructions and illustrations for making up the "one-man throw fold," otherwise termed the "one-man fold" or the "one-man salvage cover fold and carry." It was pointed out that this type of fold is easily employed by one man in covering, or it may be used by two men, depending upon circumstances.

The "accordion fold," sometimes described as the "accordion fold and carry," is another popular method of folding that is preferred by many salvage authorities and is readily adaptable for use by either one or two men.

For two-man operations the "Underwriters" or "standard" fold is widely taught and used, especially by the independent salvage corps. The "donut roll," although a somewhat less widely

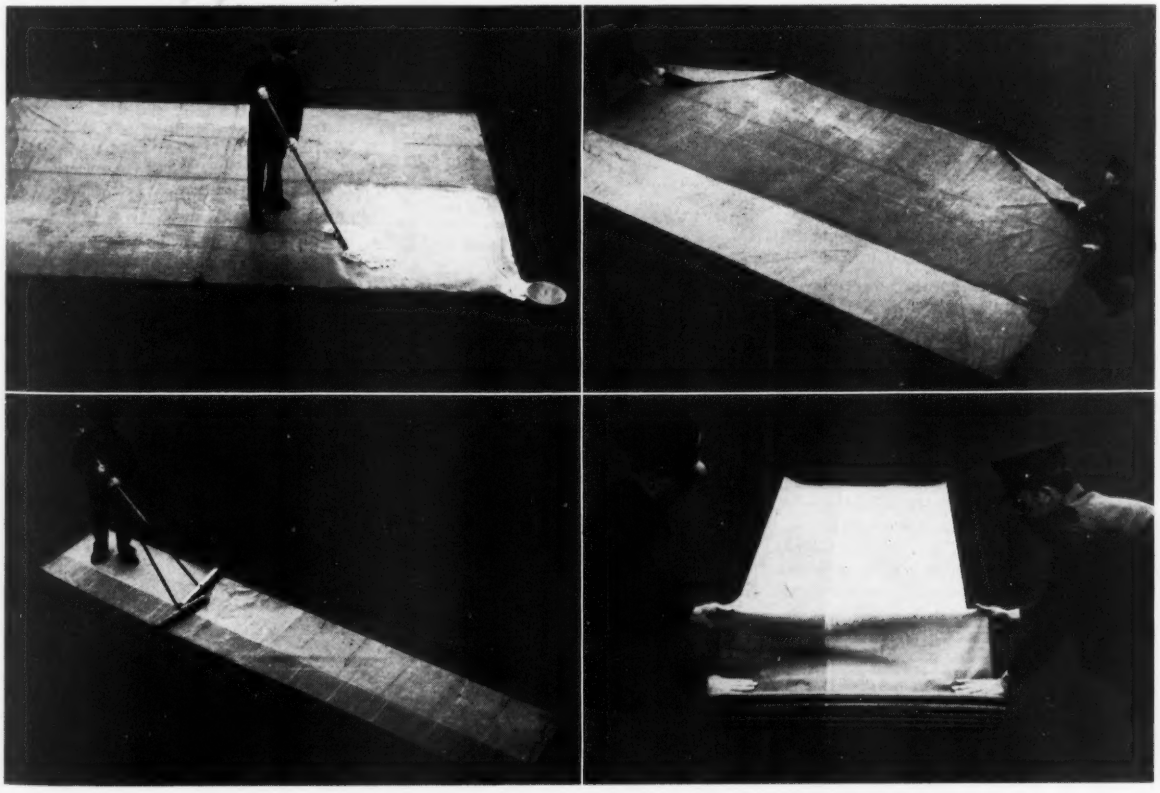

FIGURE 1 (top left); **FIGURE 2** (top right); **FIGURE 3** (bottom left); **FIGURE 4** (bottom right)—*photos courtesy Los Angeles Fire Department*

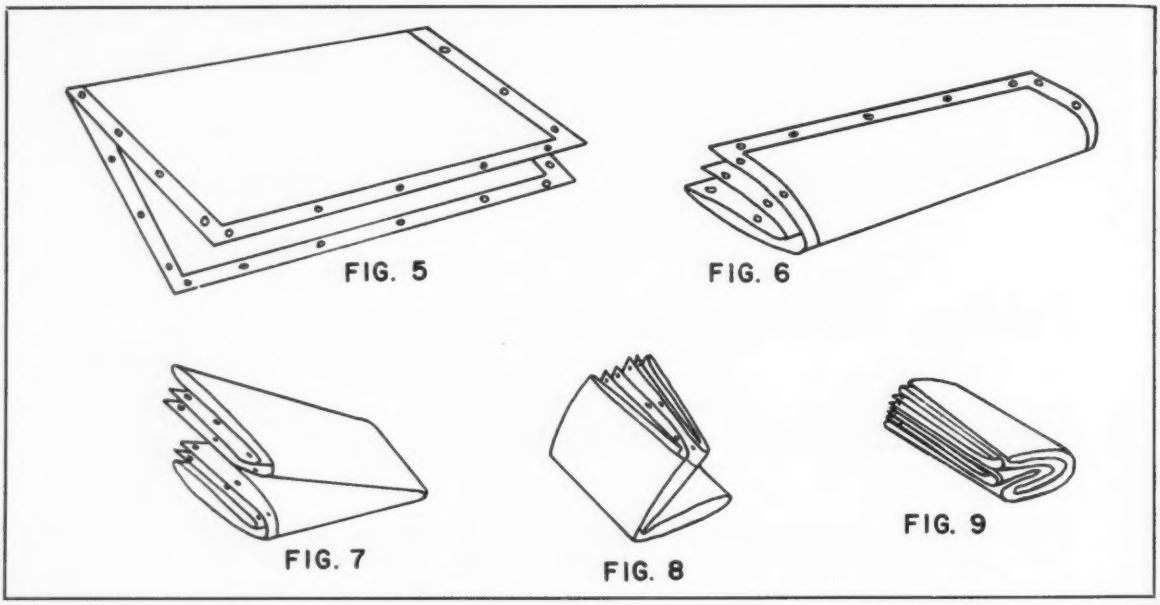

FIG. 5

FIG. 6

FIG. 7

FIG. 8

FIG. 9

known two-man method is considered by many who employ it to be a very effective fold and carry.

Before describing in detail the above folds, a few suggestions may be in order.

Clean, flat surfaces advisable to facilitate proper fold make-up

It is expected that all folding operations will be done on a clean surface. Grime and dirt can easily be transferred from another surface to the salvage cover, and in turn, from it to the material to be protected. A flat surface also facilitates folding operations.

An important step that is taken by salvage corps and squads equipped with rubberized covers is illustrated in Figure 1. Before starting a fold, it is necessary to dust the rubber surface with talcum or powdered soapstone to prevent sticking during storage on the apparatus, or in quarters.

In the following prescribed procedure it will be noted that the steps taken result in the dusted surface being folded in. When the cover is unfolded the talc or soapstone cannot come in contact with the protected material.

Accordion fold—Los Angeles Fire Department Method

The advantages of the accordion fold are readily apparent. It is easily and quickly thrown by a single man or stretched by two men. It is very convenient for making up stairway drains and ladder and other chutes by simply extending it out and over the intended supports. The width is readily adjusted as required by opening the lengthwise folds to the desired size.

Perhaps the chief disadvantage of the accordion fold is the fact that it is so easily unfolded. There is a tendency for it to separate from the pack and to lose its folds if dropped accidentally or carried improperly. Care must be exercised therefore in packing, transporting and handling covers made up with this fold.

There are several minor variations in the make-up of the accordion fold. The procedure described and pictured herein is that followed by the Los Angeles Fire Department.

With the cover stretched out flat, the corners are turned in for a short distance, as shown in Figure 2. The edges are then folded in toward the center the long way about three feet. This operation is repeated until each side of the cover is folded in to approximately three feet in width. One folded side is then lapped over the other the long way as shown in Figure 3.

In order to facilitate removal of air and wrinkles which otherwise might impair folds, two push brooms can be used to advantage by simply pushing them the entire length of the cover as it rests partially folded on the flat surface (Figure 3). This makes for a more compact fold

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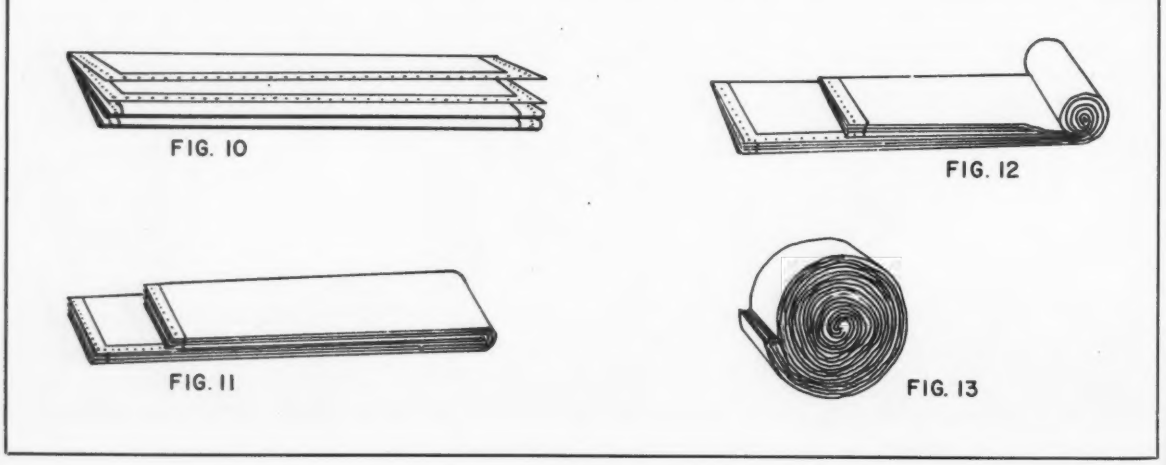


FIG. 10

FIG. 12

FIG. 11

FIG. 13

Continued from page 580

with resultant saving of space on apparatus and for greater ease in carrying.

The final folding procedure is completed by the men as shown in Figure 4. One hand of each man is placed about eight to ten inches in from one edge of the cover itself and with the other hand the cover is pulled over itself in an even accordion fold. This is continued until the cover is completely folded into a compact bundle.

Underwriters or standard fold

One of the most popular of the two-man folds is the Underwriters fold. Quickly and easily made up, it is readily stowed on apparatus and several can be carried by each man to the scene of salvage operations. If accidentally dropped it tends to remain folded.

With the cover lying flat, one of the long edges is brought over to the other. This may be done by simply folding over the long way or the cover may be grasped at the center by two men stationed opposite each other. By lifting and snapping the cover into the air, shaking out the wrinkles and swinging the folded half to one side, the first step is completed. The cover is laid down as shown in Figure 5.

The two men fold the cover over itself once again, starting at the single or grommet edges and carrying it over to the folded edge (Figure 6). The cover may be secured in place during this step by each man placing one foot on the center line of the intended fold as shown in the previous installment for the one-man throw fold.

One end of the partially folded cover is then carried over to the other as in Figure 7; reversing direction, the cover is folded back upon itself as in Figure 8. Again reversing direction, it is folded to final form as in Figure 9. If the size of the finished fold is too great for convenient storage on apparatus, an additional further fold can be made. Properly executed, the single or grommet edges will be in the center of the finished fold, with all four corners together. This is an important point which will be demonstrated when stretching the covers.

Salvage corps donut roll

A second type of two-man fold is used by some salvagemen. This is termed the donut roll and is considered advantageous where speed is required in protecting exposed material and where space permits its use. In the hands of trained men, the covers may be snapped open and ballooned over stacks very quickly.

The roll is prepared in its initial stages similarly to steps shown by Figures 5 and 6 of the Underwriters fold, except that one additional fold is made so that the completed preparatory fold has a width of about two feet. It is important to keep the single or grommet edges on the top as shown in Figure 10.

The cover is then folded lengthwise over itself until one end is short of the other about two feet, as in a donut roll of hose (Figure 11). The cover is then rolled tightly from the folded end until a compact roll results, with all single edges square (Figures 12 and 13). Some experimentation may be necessary with the various types of covers used in order to obtain the proper distance of underlap. This is due to differences of material, weight and stiffness.

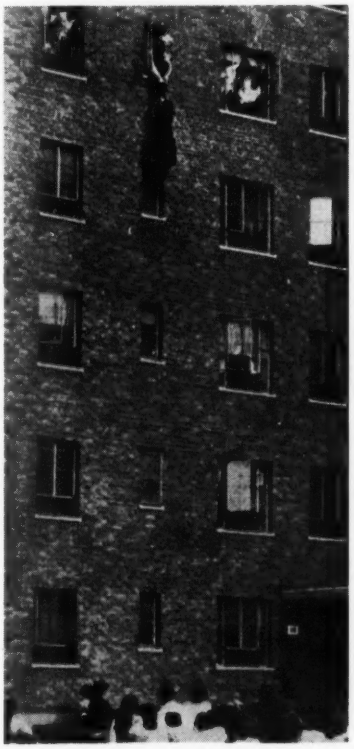
The made-up roll may be kept intact by securing it with a short length of cord or tape. One salvage corps uses rubber bands cut from discarded truck tire inner tubes. Easily put in place and removed, the bands are an excellent gadget for keeping the roll tight. They may also be applied to other type folds where there is possibility of the made-up fold coming apart in handling or storage. □□

Appreciation is extended to the Los Angeles Fire Department for the photographs and permission to quote from its excellent manual on salvage.

Rescue Coincidence in Newark, N. J.

When the Newark Fire Department crew of Hook and Ladder 5 caught Mrs. Eva Magwood in a life net on June 3, 1956, following a frustrated suicide attempt from the fifth floor, it marked the second time within a year that they had performed a net operation. As reported in the November, 1955 FIRE ENGINEERING, the same crew, using the same net, had successfully caught a man who jumped from the ninth floor on August 1, 1955.

To add to the oddity, the rescue was made at the same apartment house, and the net-holders stood near the original location in making the catch. Captain James Nolan, who had successfully supervised the previous operation, again conscripted several policemen to assist the Ladder 5 members in holding the net, and had hardly placed them in position when the woman was dropped.



Just seconds after this picture was taken, Mrs. James Magwood was dropped by those holding her into a fire net of the Newark Fire Department. Last August this same building and net, and most of the same crew of Ladder 5, figured in another suicide attempt

Fireman Fred Boehringer was knocked to the ground by the impact of the catch and sustained some bruises and strained muscles but was able to return to duty following a hospital checkup. Mrs. Magwood suffered no apparent injuries.

—Thanks Chief Harry J. Sommers

USC Fire Administration Program Five Years Old

A dinner marking the fifth anniversary of the University of Southern California's pioneering fire administration training program was held at a Crenshaw District restaurant on the evening of June 8.

In charge of the dinner was Dr. John Gerletti, Jr., director of the program.

Among the several speakers were Dr. Henry Reining, Dean of the SC School of Public Administration; Chief Frank Sandeman, Long Beach Fire Department representing the Southern California Fire Chiefs Educational Advisory Committee; and Stanley Johnson, director of SC's Civic Center Division.

The university this year awarded 12 certificates and 7 degrees, including one master's, in the Fire Administration Program.

More than 700 firemen have taken courses in the program. *—Cliff Dektar*

"Project Skyfire"

"Project Skyfire," an operation to experiment with control of lightning by cloud seeding, has been initiated by the federal forest rangers. The Weather Bureau, which is cooperating in the study, has mounted a radar unit on a mobile truck trailer in Arizona's Coconino National Forest where lightning causes hundreds of fires each year. The unit will be used to track and analyze thunder storms and compare results of seeded and unseeded cloud systems.

Forestry officials said they now know enough about the origin and makeup of lightning storm clouds to attempt to control this natural phenomenon and they have hopes for the success of the project. To record the life cycle and behavior patterns of the storms, motion picture cameras have been mounted in several fire towers.

N.F.P.A. 60th Annual Convention Sets Fast Pace

Approximately 1400 persons interested in fire suppression gathered at the Hotel Statler, Boston, June 4-8 to make the National Fire Protection Association's 60th Annual conclave an outstanding success.

This year, instead of the many simultaneous sessions which previously featured NFPA meetings, there were instead seven general sessions, with Monday the 4th only devoted to special interest groups. During the week, however, there were constant meetings of various NFPA committees whose reports were later made before the general sessions.

Among the prominent leaders in or kindred to the fire service who addressed the Conference were: Raymond M. Hill, Assistant Chief, Los Angeles Fire Department, whose topic was "Are You Keeping Up With Chemical Hazards?"; Fire Chief Reynold C. Malmquist, Minneapolis, whose paper "Fire Prevention is Spectacular in Minneapolis" was highlighted by motion pictures; Captain Carrol Shaw, Office of State Fire Marshal, Connecticut State Police, whose subject was "Are Your Fire Laws Up To Date?"; Charles R. Scott, Ohio State Fire Marshal, who discussed "Determining Leakage From Underground Tanks and Pipes;" N. C. Strother-Smith, M. I. Fire E., Director, F.O.C. Fire Protection Association, London, England, who told about "Current Developments in Fire Protection in Great Britain, and Fire Chief Edward N. Montgomery, Boston Fire Department, whose subject was "What's Wrong With Fire Extinguishers?"

Allen L. Cobb, Safety Supervisor, Kodak Park Works, Eastman Kodak Co., was moderator of a panel which discussed "Reactive Chemicals in Industrial Operations". The panel members were: Walter W. Baker, Project Engineer, Carbide and Carbon Chemicals Corp.; Mathew M. Braidech, Research Director, National Board of Fire Underwriters; William H. Doyle, Chemical Engineer, Factory Insurance Association, and Assistant Chief Raymond M. Hill, Fire Prevention Engineer, Los Angeles Fire Department.

Prominent among the reports of committees, was that of Fire Chief Henry C. Thomas, Hartford Conn., as chairman of the Committee on Fire Department Equipment.

Chief William F. Fitzgerald, Seattle, Wash., president of the International Association of Fire Chiefs addressed a general session on "Current Problems of the Fire Service." Fire Commissioner Francis X. Cotter of Boston described the progress made by his city's fire department, and T. Sedden Duke, past president of the National Automatic Sprinkler & Fire Control Association, had the topic "Automatic Sprinklers: Guardians of Life and Property."

Fire Chief Keith Klinger Los Angeles County Fire Department, gave an inspirational talk captioned "Good Fire Prevention is Good Public Relations. He was followed by Fire Commissioner Frank I. McNamee of Philadelphia, Pa., who told how that city won the last year's fire prevention award.

George Swan honored

On Sunday, June 3, George L. Swan, Assistant Chief Engineer of the National Board of Fire Underwriters and chairman of the Signaling Systems and Thermostats Committee of the NFPA, was tendered a surprise clambake by a host of friends in the fire service, at the Hingham, Mass., Fire Department Headquarters, Chief Albert Kimball, host. Mr. Swan, who retires this fall from the NBFU, was presented a number of power tools for use in his retirement.

Spotlighting the entertainment was an evening session devoted to the latest motion pictures dealing with fire subjects, including first showing of the new film "Alarm" which is expected to become a permanent TV feature. A special entertainment program also was provided for the ladies.

Election of Officers

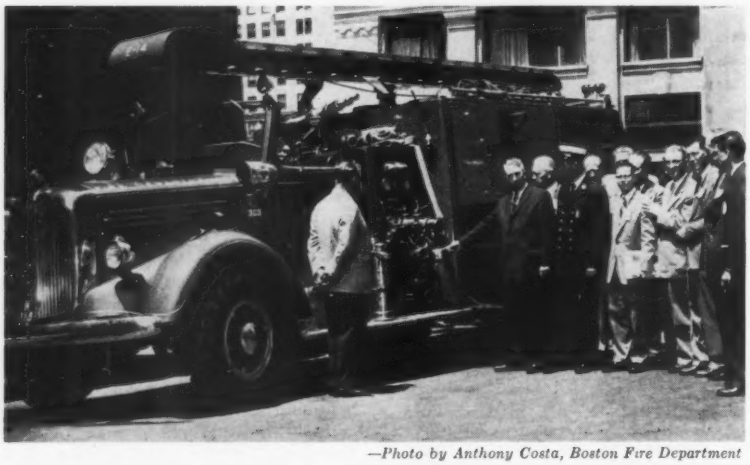
Officers elected to serve the National Fire Protection Association for the coming year are: President, John A. Neale, National Board of Fire Underwriters, New York; First Vice-President, Chief Henry G. Thomas, Hartford, Conn., Fire Department; Second Vice - President, Loren S. Bush, Chief Engineer, Board of Fire Underwriters of the Pacific, San Francisco.

John A. Neale

Richard E. Vernor, Manager, Fire Prevention Department, Western Actuarial Bureau, Chicago, was re-elected Chairman of the Board of Directors and Howey T. Freeman, President, Manufacturers Mutual Fire Insurance Company, Providence, was re-elected NFPA Secretary-Treasurer.

George J. Richardson, Secretary-Treasurer, International Association of Fire Fighters, Washington, D. C., was re-elected to a three-year term on the Board of Directors.

Charles R. Scott, Ohio State Fire Marshal, was elected Chairman of the Fire Marshals' Section.



—Photo by Anthony Costa, Boston Fire Department

Boston Assistant Chief Leo J. Driscoll proudly points out features of the department's latest acquisition, one of five Mack hose wagons converted to engine squad pumping units with Class A 750 gpm pumps. Compartments hold a wide variety of tools, hose and appliances. Unit mounts a portable deck gun, metal ladders and rescue equipment

New York Chiefs Hold 50th Annual Conference

Over 500 members registered for the conference of the New York State Association of Fire Chiefs held at Scaroon Manor, Schroon Lake, N. Y., June 3-6.

Chief Leo Barry, Utica, N. Y., President, presided over the business and educational program. Panel discussions on questions of fire department communications were under the chairmanship of Chief Lee Hunt, past President, Middletown, N. Y., with Ben Flanigin, the Gamewell Company; W. G. Bowie, New York Telephone Company; Chief Operator Henry J. Joncas, Syracuse Fire Department, and Chiefs Edward J. MacDonald, White Plains, First Vice-President, Eastern Association of Fire Chiefs; John J. Fiedler, Solvay Fire Department;

Continued on page 605

"Easiest-handling hose we've ever used"

EUREKA Multiple-Woven with Dacron Filler Cords

"Whether we are fighting a fire, drying out hose or stowing it away, we find Eureka's Dacron the easiest handling hose we've ever used," states a Fire Chief* whose department has been using it for several years. "It's much lighter, more flexible, dries faster and allows us to pack more hose in the same amount of space."

Multiple-woven on Eureka's unique circular looms, this Dacron-cotton, rubber-lined hose is available in all standard diameters. It is built to withstand test pressures of either 400 or 600 pounds, and can be furnished waxed or gum-treated if desired.

Put it on one of your pumpers and see if you don't consider it the *best all-purpose hose* your money can buy! In the long run, you'll probably find it the *most economical*, too. Write or wire today for the Eureka representative to call. He is a specialist in fire hose!

*Name on request

Note how criss-crossing vertical cords tie all plies into one solid body.

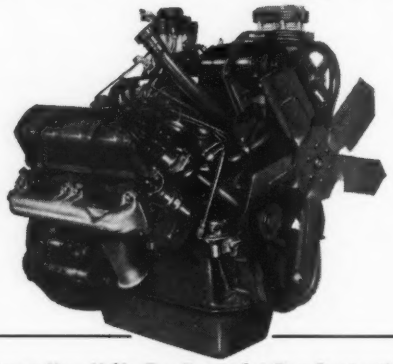
"For greater protection to life and property"

EUREKA FIRE HOSE

Since 1875, Specialists in Manufacturing Circular-Woven Rubber-Lined Fire Hose

1 Market Street • Passaic, New Jersey *Division of* **United States Rubber**

New! Most powerful V-8 engine under any fire truck hood!



Designed and powered to pace today's traffic!

These new heavy-duty V-8's now offered in the new INTERNATIONAL Model V-196 have "built-in" swift responsive power for every fire fighting requirement. They give you faster starting and high rate of acceleration . . . more *go* in all traffic conditions . . . more "keep going" on hills and grades with shifting greatly reduced.

Tested and proved as no other truck engines have ever been!

Developed and tested first in excess of 30,000 laboratory hours, then put through more than 1,000,000 test-track miles. But most important—in 2,500,000 miles of actual on-the-job operations. Conclusion of these tests —"GREAT, on every count!"

INTERNATIONAL HARVESTER COMPANY • CHICAGO

2 Great New V-8's For Powerful Fire Protection!

	V-461 (Standard)	V-549 (Optional)
Displacement	461 Cu. In.	548.7 Cu. In.
Bore and Stroke	4⅛ x 4⅝	4½ x 4⅝
Maximum hp.	226 at 3600	257 at 3400
Maximum Torque	420 at 1600	505 at 2000

Pressure Controlled-Flo Cooling! Full circulation, fully controlled. Cold weather by-pass.

"Wet" Replaceable Exhaust Valve Guides!

Exhaust Valve Faces and Seats of Stellite!

19 Pound Aluminum Flywheel Housing!

If you need a fast moving, maneuverable fire truck with high pumping capacities . . . a truck you can depend on for top performance, contact your INTERNATIONAL Dealer or Branch.

INTERNATIONAL® TRUCKS

All-Truck Built to save you the BIG money!

Motor Trucks • Crawler Tractors • Construction Equipment
McCormick® Farm Equipment and Farmall® Tractors

short cuts and gadgets

Pump Cans—and Pump Can'ts

The last winter was a rugged one for a lot of fire departments. Out of their experiences come some anecdotes which offer food for thought for readers of "Short Cuts and Gadgets."

In one case firemen had to refill a pump tank extinguisher with calcium chloride (anti-freeze) solution. They did so and not long after found their pump can was unfit for service.

After some quizzing and research it was disclosed that the trouble resulted from their having used hot water to dissolve the calcium chloride. Hot water was used because it was believed to be quicker.

What happened was that when the hot solution cooled, much of the calcium chloride was precipitated out of solution into a solid chunk. So the extinguisher was kaput.

When making a non-freeze solution for portable pump tanks of fire barrels, use water not over 70 degrees. It may call for a bit more stirring, but it will avoid this trouble.

Vaseline on Pump Tank

Before first filling a new pump tank extinguisher, it is a good idea to coat the plunger with vaseline. That will assist in maintaining the original, smooth, polished surface and discourage pitting and corrosion.—***Association of American Railroads News Letter***

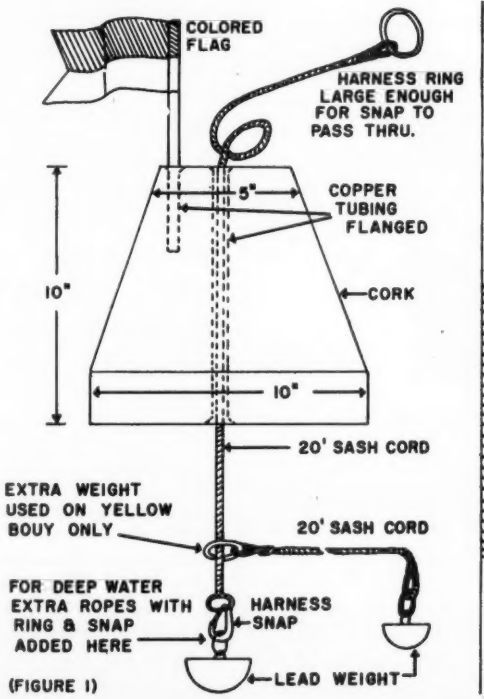
'Round the Clock Dragging Operations—Saranac Lake, N. Y., Style

In the past, FIRE ENGINEERING has carried descriptions of dragging procedures as practiced in various sections of the country. The system outlined here is that used by the Saranac Lake, N. Y., Fire Department and makes use of several improvised gadgets. The method and equipment is best described in these words of former Fire Chief Carl H. Smith, Deputy Fire Coordinator, Franklin County:

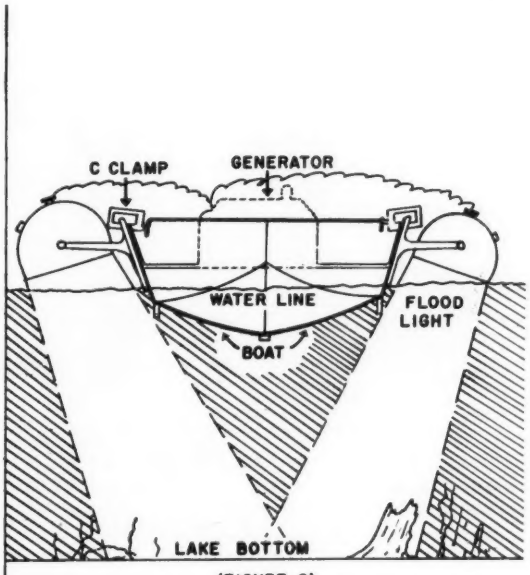
"There are two things we have found to be very successful in water operations. The floats, three in number, are made of cork taken from an old cooler. Two are painted red and silver and carrying matching flags. The third is bright yellow with a yellow flag (Figure 1).

"When we get a call for a drowning we first locate as near as possible where the accident happened, and the yellow float is anchored. Then we arrange the boats, one, three, five, or as many as we have in a line and proceed to drag with the inside boat carrying the red and silver buoy. On reaching the opposite shore or well past the scene, number one boat holds its position while the other boats pivot and line up again with the end boat dropping a buoy. All boats then proceed in a line to the starting point, where the operation of turning is repeated, with the second buoy being dropped to mark the point. On the third trip the first buoy is picked up and relocated by the end boat. This is continued until the area is covered. We then start over at right angles and do the same. In this manner a systematic search is made with little chance of missing an area. This is the only way I know that it can be accomplished.

"We usually drag until 6 p.m. and if no results are obtained we then let the water settle until after dark when the second method is used. We clamp two large flood lights to the sides of our boat with "C" clamps. Both lights are 500-watt floods operating from a portable generator. By adjusting the beams so that they meet on the lake botton, a large area can be seen (Figure 2). This is particularly good in water up to twenty feet deep with a sand bottom, although it will work under other conditions with varying degrees of success. By lying on the front deck and moving the boat slowly, the bottom can be seen quite clearly."



(FIGURE 1)



(FIGURE 2)

WHAT'S NEW

Among the Manufacturers

- products
- processes
- personalities

W. E. Tromanhauser, V. P. Pyrene-C-O-Two

The Pyrene-C-O-Two Division of Newark, N. J., has announced the appointment of W. E. Tromanhauser as vice-president and general sales manager.

Mr. Tromanhauser leaves the position of president of the Buffalo Fire Appliance Corporation of Dayton, Ohio, to join Pyrene.

He started with Buffalo Fire Appliance in 1940 as a district manager and was elevated to general sales manager in 1949. In 1950 he was named to the dual positions of vice-president and general sales manager and in 1953, he was elected president. He will remain a director of Buffalo.

U/L Listed Fire Detection System

The "Messick" Automatic Fire Detector is a self contained, non-electric, detection and warning system listed by the Underwriter's Laboratories. It features a non-mechanical glass eye monitor for visual checking and the warning horn can be tested by a simple hand valve.

Available for industrial and residential use, the detector cylinders can be installed up to 1500 feet from the signal horn. Placed either inside or outside the building to be protected, the horn has an audio power of 110 db and a range of up to one-half mile. Full information can be obtained by writing to the Standard Alarm and Signal Co., Berkeley Heights, New Jersey.

Hanks Resigns from American-LaFrance

Effective June 1, 1956, George R. Hanks resigned as chairman of the board and chief executive officer of American-LaFrance Corporation of Elmira, N. Y.

Mr. Hanks was named president in October, 1951, succeeding Edward E. O'Neill. He had been a company director for several years and since 1950 had served as chairman of the executive committee.

Earlier this year, when Mr. Hanks was elected chairman of the board, he was succeeded to the presidency by James F. Connaughton, former vice-president and director of Baldwin-Lima-Hamilton Corp.

American-LaFrance is a subsidiary of Sterling Precision Corp. of Buffalo, N. Y.

Reviv-A-Life Resuscitators

The Midwest Oxygen Equipment Co., Chicago, Ill., has announced a complete line of Reviv-A-Life resuscitators designed to meet the needs of hospitals, ambulances, fire and police departments. Eight models are available, all of which use the Baer Control Valve which provides suitable service for infants or adults. The inhalation and exhalation phases are controlled at accurate levels and in addition have positive secondary safety devices.

For further information, write the company at 1664 W. Ogden Avenue, Chicago 12, Ill.

G. A. Swim Executive V-P Gamewell Company

Grenfell A. Swim has been elected Executive Vice-President in charge of sales, engineering and production of The Gamewell Company, Newton Upper Falls, Mass. Announcement was made at the company's annual sales meeting held recently on Cape Cod.

Mr. Swim joined Gamewell, the country's oldest and largest manufacturer of fire alarm systems, in 1930. After serving in various sales and administrative capacities, he was appointed sales manager for the company in 1952. On August, 1955, he was elected a vice-president.

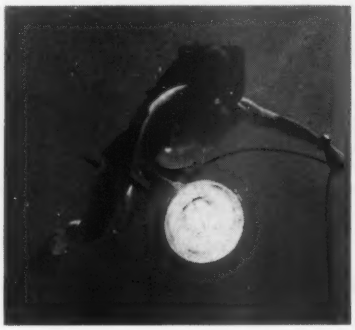
TV Program Features Tour of M. Greenberg's Sons

A west coast television program, "Success Story," honored M. Greenberg's Sons, San Francisco, recently by giving viewers a guided tour of the firm's plant and showing how its line of fire hydrants, art bronzes and other products are made.

Stuart N. Greenberg, president of the company and grandson of the founder, took part in the program along with two of the firm's oldest employees: Harold Hendrickson, who has been with the company for 37 years and George Delucchi, who has 33 years of service. President Greenberg himself has been with the company for 43 years.

M. Greenberg's Sons is celebrating its 102nd anniversary this year.

Crouse-Hinds Introduces New Portable Underwater Floodlight



Firemen and rescue workers will welcome this new portable underwater floodlight. Equipped with a No. 1 photo flood lamp, the 5¾-pound unit provides excellent illumination for seeing objects under 25 feet or more of clear water. Suitable for use under 100 feet of water the Type DIV floodlight measures 17 inches long and 13 inches across the reflector face. Completely waterproof, it has a molded rubber body, cast aluminum reflector support, and polished aluminum reflector. Its heat-resisting glass globe is protected by a specially plated steel wire guard. Requires normal 115-120 volt A.C. service.

For further information, write Crouse-Hinds Company, Wolf and Seventh North Streets, Syracuse, New York.

Mack Expands in South

Appointment of John G. Caley as head of Mack Trucks, Inc.'s Southern Division Fire Engine Department is announced by Bert Nelson, manager of Mack's Fire Apparatus Division. Mr. Caley whose headquarters will be in Atlanta, Ga. has served Mack in the South for nine years as manager of national and fleet sales.

New Goodrich Data Sheet on Industrial Fire Hose

A four-page illustrated data sheet on its line of industrial fire hose has been published by The B. F. Goodrich Company Industrial Products Division, Akron, Ohio, and is available without charge.

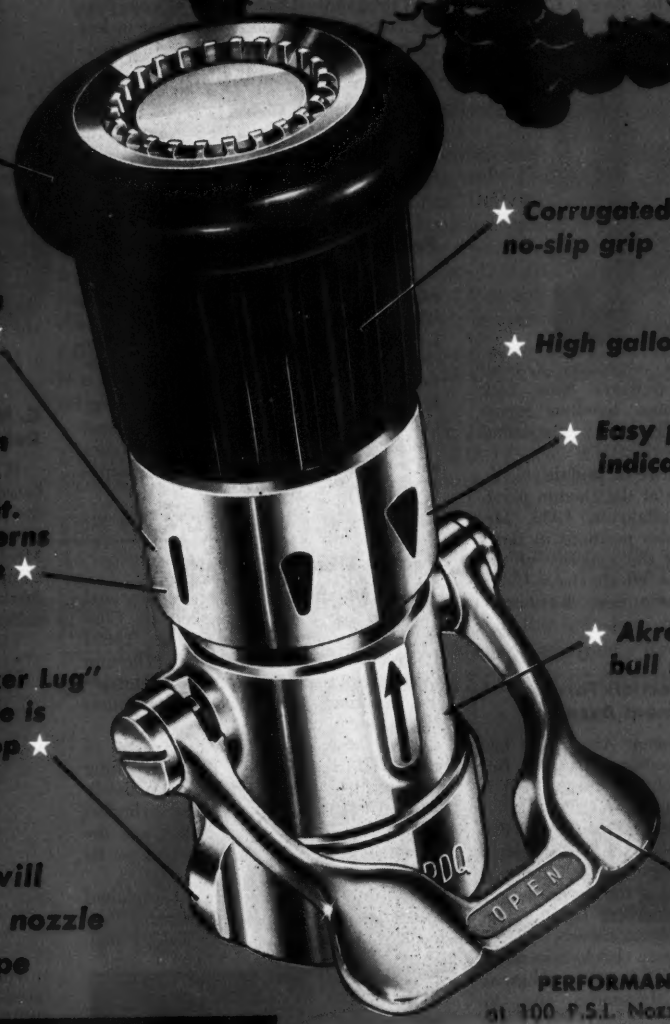
The publication includes data on the selection and use of hose for safety and long life, specifications on 11 types of

Continued on page 588

YOU EXPECT THE BEST FROM AKRON BRASS

– here it is . . .

Entirely New PDQ® FOG NOZZLE



★ Resilient rubber bumper for protection against damage

★ Adjustable through all angles of fog

★ Positive stream positioning — by feel or sight. Clicks into fog patterns or straight stream

★ Swivelling "Rocker Lug" base — handle is always on top

★ You too will agree — finest nozzle of its type

★ Corrugated no-slip grip

★ High gallonage

★ Easy pattern indicators

★ Akron quality ball shut-off

★ Man-size handle

PERFORMANCE DATA
at 100 P.S.I. Nozzle Pressure

STYLE	SIZE	NARROW FOG GPM
1209	¾" - 1"	24
1218	1½"	95
1219	1½"	125
1229	2½" for PP	250
1239	2½" Dir. Con.	250
1249	2½" with PP	250

AKRON BRASS
FIRE FIGHTING EQUIPMENT

Akron Brass Mfg. Company, Inc. • Wooster, Ohio

MANUFACTURERS' NEWS

Continued from page 586

BFG fire industrial hose and description of a new B. F. Goodrich chemical treatment for hose called "Superseal" to protect against mildew, rotting, moisture absorption and freezing; and BFG "Ply-lock" hose end protection.

B. J. O'Hare Heads Buffalo Fire Appliance Corp.

Bryon J. O'Hare has been elected vice-president and active head of the Buffalo Fire Appliance Corporation, according to an announcement by Board Chairman William M. Wetzel.

Until his recent promotion, O'Hare was manager of Buffalo's New York branch and warehouse, handling export and Eastern Division fire extinguisher sales.

Mr. O'Hare, a native of Buffalo, N. Y., will maintain offices at the Dayton plant.

Since joining Buffalo in 1939, Mr. O'Hare has held sales positions in territories encompassing the majority of the United States. His efforts have been largely in establishing new distributors for Buffalo.

Fire Research Section Formed by Portland Cement Assn.

The Portland Cement Association has announced the formation of a Fire Research Section, effective June 1, 1956; it is headed by Clifford C. Carlson. The new section, established within the Research Department of the Association's Research and Development Division, will eventually be housed at the organization's Research and Development Laboratories in Skokie, Ill., a Chicago suburb.

Mr. Carlson has been closely associated with the Association's fire testing program at Underwriters' Laboratories, Inc., in Chicago.

L. A. Wehde Assistant Sales Manager FWD

Louis A. Wehde has joined the Four Wheel Drive Auto Company staff as assistant sales manager, it was announced by G. F. DeCoursin, FWD vice president-sales. He was formerly midwest zone manager for Dodge Bros. Corporation and before that zone manager for Hudson Motor Car Company.

International Fermont Manual

The International Fermont Machinery Company, Inc., Ramapo, N. Y., published an eight-page manual entitled "Engineered Kilowatts," which includes reference material, forms and check lists valuable to engineers, contractors and fire service officials interested in portable or standby electric plants. For copies write to the company and ask for Bulletin No. 955.

Leece-Neville Rectangular Motors

The first rectangular shaped motors said to give the same output as comparable conventional round motors but in less space, are being marketed by the Leece-Neville Company, 1374 East 51 Street, Cleveland, Ohio.

The motors, available in 6, 12, 24 and 32 volts feature all-welded construction which provides maximum stability and resistance to twisting.

Peerless Fire Pump Bulletin

The Peerless Pump Division, Food Machinery and Chemical Corporation, 301 West Avenue 26, Los Angeles 31, Cal., has issued a new 36-page bulletin describing and illustrating the latest Underwriters' approved Peerless centrifugal fire pumps. The bulletin, No. B-1500, contains fire pump selection charts and typical fire pump specifications. Copies may be obtained by writing the manufacturers.

Pocket Size Resuscitator

A pocket size portable resuscitator and inhalator has been announced by Continental Hospital Industries, Inc., 18624 Detroit Ave., Cleveland 7, Ohio. The unit weighs less than two pounds and makes use of thumb-size replaceable cylinders of oxygen.

By a twist of the wrist six liters of oxygen are released into the rebreathing bag and the cylinder may be immediately replaced. A supply of oxygen cylinders may be carried in a coat pocket and the equipment easily taken to the rescue location.

The unit was designed and developed in cooperatin with Western Reserve University and has been fully field tested.

R. B. Dasch Advertising Manager Hamilton Rubber

Hamilton Rubber Manufacturing Corporation has announced the appointment of Raymond B. Dasch as advertising manager. Mr. Dasch was formerly with Arndt, Preston, Chapin, Lamb & Keen, Philadelphia, Pa., where he served as an advertising agency account executive.

In making the announcement, Erwin W. South, Vice-President in Charge of Sales, said Mr. Dasch would be assigned to the company's main office in Trenton, N. J. He will be responsible for advertising planning and execution, with strong emphasis on sales promotion and merchandising.

C. M. Scholz General Manager Rubber Div., Thermoid Co.

Warren E. Hill, president of Thermoid Company, Trenton, N. J., has announced the appointment of Charles M. Scholz as general manager of the Rubber Division. Mr. Scholz is a vice president of the company and will continue as director of marketing for all divisions and subsidiaries.

He joined Thermoid as assistant to the manager, Industrial Rubber Division in 1954. He was later named assistant to the president and director of marketing, and was made a vice president in 1956.

He was formerly with Pioneer Rubber Mills, San Francisco, Cal., and the Industrial Products Division of B. F. Goodrich, Akron, Ohio.

Mr. Scholz has long been active in fire circles. He was formerly with American-LaFrance Corporation and, later, as a lieutenant commander in the Navy, was associated with the fire protection and security sections in the office of the Chief of Naval Operations.

Announcing . . .

Completely listed under

UL

Re-examination Services

MESSICK* *Automatic*

FIRE DETECTOR SYSTEMS

THE ONLY NON-ELECTRIC SELF CONTAINED AUTOMATIC SYSTEM MADE, WITH GLASS EYE MONITOR

Designed to comply with N. Y. State Multiple Housing Bill

½ actual size weighs 3 lbs.

HOME DETECTOR KIT (AVERAGE 5 OR 6 ROOM HOUSE) $112.50 COMPLETE

Home system delivered in easy to install kit—or can be readily installed by distributor.

SAVES LIVES—SAVES PROPERTY

Activated By Harmless Dichlorodifluoromethane

A Fire Detector System that Fire Inspectors can safely recommend for Homes, Schools, Institutions, Hotels, Farms, Hospitals, Fraternities, Mines, etc., has now been listed by Underwriters Laboratories. Detectors operate at 136 F. and 174 F. (for attics) from ¼" Tubing. The aluminum tubing is attached to the outside of house. Average size home of five or six rooms requires 75' of tubing and three detectors. Additional Detectors can be added. "COLORED EYE" in each detector indicates it is in perfect operating order (if at any time the monitor GLASS EYE should lose its color—return the detector for immediate FREE replacement.)

LOUD-SHRILL sounding horn can be placed as far as 500 feet from DETECTORS. Horn can now be located in occupied areas. 102 decibels of sound—blows for 20 minutes.

A NEW YORK STATE MUTUAL FIRE INSURANCE COMPANY IS GRANTING A 10% PREMIUM REDUCTION TO THOSE WHO INSTALL (IN N. Y. STATE) A MESSICK SYSTEM. (excluding class D risks.)

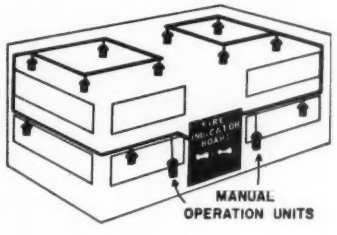
FOR INDUSTRIALS:

As many detectors as necessary can be added to tubing—and a test cylinder (for inspection blowing. Fire Drills, etc., MANUALLY OPERATED) can also be placed on the tubing line. Tubing can be in sections to pin-point Fire. Diaphragm Horn can be located inside or outside of buildings. 110 decibels of sound—blows for 20 minutes.

UNDER NORMAL CONDITIONS HAS ½ MILE OR MORE OUTSIDE SOUND RANGE.

U/L LISTED FOR 20 FOOT SPACING = 400 Sq. Ft.

No Maintenance



INDUSTRIAL SYSTEM
$29.50 PER DETECTOR

plus tubing at .15 per ft. (includes fittings.)

HORN $5.00

You can safely recommend the MESSICK* Automatic Fire Detector System!

STANDARD ALARM AND SIGNAL CO. 55 INDUSTRIAL ROAD, BERKELEY HEIGHTS, NEW JERSEY

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FALSE ALARMS

Liquor and Longevity

The horse and mule live 30 years
And nothing know of wine and beers.
The goat and sheep at 20 die
And never taste of Scotch or Rye.
The cow drinks water by the ton
And at 18 is mostly done.
The dog at 15 cashes in
Without the aid of rum or gin.
The cat in milk and water soaks
And then in 12 short years it croaks.
The modest, sober, bone-dry hen
Lays eggs for nogs, then dies at 10.
All animals are strictly dry,
They sinless live and swiftly die.
But sinful, ginful, rum-soaked men
Survive for threescore years and ten.
And some of us, the mighty few,
Keep drinkin' till we're 92.

Mixed Nomenclature

At a recent conference of blaze beaters a bunch of fire department medicos found themselves in a huddle, and reminiscent mood. One of them came up with this yarn.

It seems there was a certain fire fighter nearing the retirement age who found it difficult to keep up with the Johnny-come-latelies in the performance of his duties. So he hied himself to the department medico for a checkup.

The doctor who is by way of being a bit of a faddist about diet, assured the veteran "There's not a thing wrong with you that carrots and plenty of them can't cure. Just take as many of them as you like."

A month later the doctor found the fire fighter waiting in his office for him. He looked the nervous smokeater over and noted a decided improvement in him. "Just go right on eating carrots," he prescribed.

The patient leaped from his chair, crying, "Carrots! Migawd Doc, I thought you said claret. I've been drinking a bottle a day!"

Fire Fighter Fables

Once upon a time a woman called at the office of a psychiatrist to see him about her husband.

"What seems to be his trouble," asked the doctor.

"I wish you would see him. He blows smoke rings from his nose and I'm terribly frightened."

"Well, that is a bit unusual," said the M.D., "But it's nothing to be alarmed about. Many smokers blow smoke rings by the hour."

"I know, doctor," she said, "But my husband doesn't smoke!"

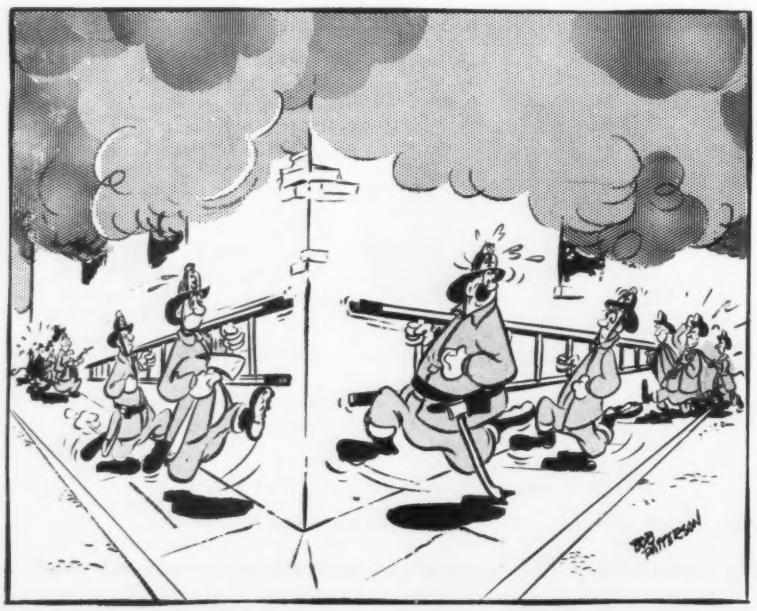
The safety engineer was beefing about his victuals. *"I know that most accidents occur in the kitchen,"* he barked, *"but do we have to get them all for dinner?"*

Capitol Efficiency

An efficiency expert in Washington asked a government worker, "What do you do around here?" The reply was "Nothing."

The expert asked another clerk the same question. Again the reply was "Nothing."

"That settles it!" exclaimed the E-man. "This damned duplication has got to go!"



"Hah! Looks like we beat 3's in again!"

Filling Out Forms

The gorgeous blonde had just filled out the municipal job application. The fire commissioner scanned the sheet—and the applicant—and then asked: "Miss Gladeye, under 'experience' could you be a little more specific than just *'Oh Boy'!"*

Only one man in a thousand is a leader of men. The other 999 are followers of women...

A national magazine sent a reporter to a little town to locate a resident who was supposed to be a super marksman. All over the region, on trees, fences and walls were targets, bulls-eyes with holes in the dead center as evidence of his skill. Greatly surprised was the reporter when the marksman turned out to be the village half-wit. "You certainly are a sure shot," the reporter remarked, "How do you do it?"

"Easy as pie," said the dim-witted rifleman. "I just shoot first and then draw the circles."

They say that girls are minors until they are 18; then they are golddiggers.
—KINKEHASER

The Burning Question

Groom: "There's something burning around here!"

Bride: "It's the turkey, but according to my calculations I can't take it out of the oven for another fifteen minutes."

When a fellow reports for duty on the Monday morning shift looking like the last rose of summer it's usually due to his weekend condition.

Typographical Bull

The *Rising Moon Reporter* described the valiant efforts of the volunteers at the big market fire in this fashion: *The firemen were unable to get to work on the fire because they couldn't find the hydrant wench"* (the italics are ours).

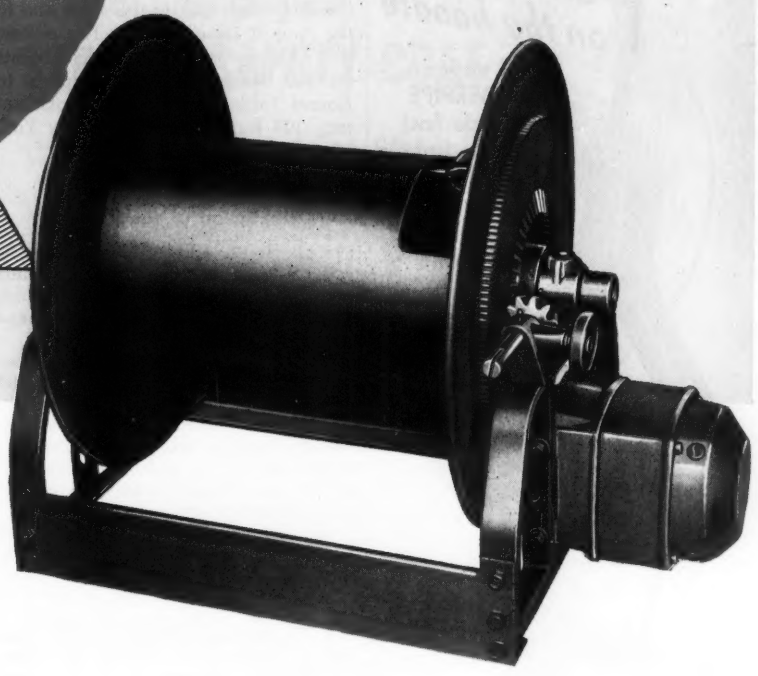
Overheard at the New England Association of Fire Chief Convention: *I know a certain fire chief who isn't overpaid—they just gift wrap his salary check.*

Generous George

The judge had just awarded a divorce to a fireman's wife who had charged her husband with non-support. "And," he said to the husband, "I have decided to give your wife $50 a month toward her support."

"That's fine, Judge," said the newly divorced fire fighter, "And once in a while I'll try to slip her a few bucks myself, just for kicks."

FIRST *in engineering leadership*



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Precision Built
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Competitively Priced

THE RUGGED STRENGTH of these great Fire Fighting Reels is more than a match for the most severe service to which they can be subjected.

FRAMES are of channel steel, end-welded and angle-braced—extra strong, yet flexible enough to absorb road shocks.

DRUMS are of heavy 11-gauge steel, smooth-seamed and arc-welded for perfect roundness, and reinforced with a series of heavy steel rods.

HIGH PRESSURE SWING JOINTS and piping will withstand pressures in excess of 1,000 pounds. Standard swing joints and piping will withstand pressures up to 1,000 pounds.

GEAR-TO-GEAR DRIVE assures smooth, positive power transmission—eliminates adjustment and alignment problems of chain drives.

EXPLOSION PROOF MOTORS are of exclusive design — compact, powerful, efficient — Underwriters' Approved for all electrical systems.

ALSO DUAL-REEL, starter-motor, and hand-wind models — with or without hose rollers. Distributors in principal cities. Complete catalog on request. Write, wire or phone.

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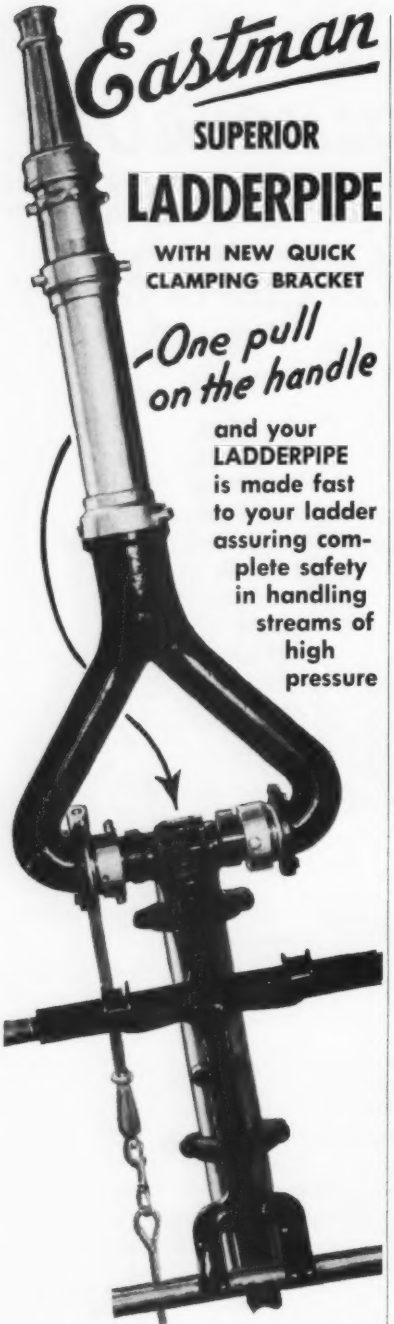
SUPERIOR

LADDERPIPE

WITH NEW QUICK CLAMPING BRACKET

-One pull on the handle

and your LADDERPIPE is made fast to your ladder assuring complete safety in handling streams of high pressure



The EASTMAN LADDERPIPE is designed with efficiency of operation in mind. Manufactured of high tensile aluminum alloy, it has been well balanced through use of red brass, with chrome plated trim.

Eastman Ladderpipes are furnished with the Superior stream straighteners to insure solid streams.

The new quick clamp of tested design makes it possible to lock the Ladderpipe in position safely in a matter of seconds: thus creating an effective water tower.

Send for bulletin No. 1-56

SAMUEL EASTMAN CO., INC.

CONCORD, NEW HAMPSHIRE

the round table

discussion of current fire department and fire management problems

Calling Off-Duty Firemen

THIS IS THE SECOND installment of the Round Table on calling off-duty firemen.

The generous response from our readers makes it necessary to carry the discussion over to this issue and to the August issue as well. The editors will welcome any additional comments on the subject. Address replies to Round Table Editor, FIRE ENGINEERING, 305 East 45th Street, New York 17, N. Y.

Discussion of the Subject

E. L. Smith, Chief, Salem, Ore.: We call back off-duty firemen by sounding a siren located atop City Hall which can be heard throughout the city, and by personal phone calls.

Our response is good—80 to 100 per cent on night calls and 75 to 90 per cent on day calls.

Our system is ample for our use, as off-duty response on greater alarm fires is part of the rules of employment.

The men do not receive extra pay for such emergency service.

We have two pumpers in reserve. One aerial truck is to be recommissioned in the near future.

J. H. Freeman, Chief, Tuscon, Ariz.: Off-duty firemen are called back to duty by telephone. Almost all of them have telephones at home. Call lists are maintained at all stations and at the alarm desk for use when the off-duty men are needed.

Nearly all the men can be recalled during night and evening hours and about 50 per cent during the day.

The men are not paid for this emergency service, but are given credits for additional time off.

We maintain reserve apparatus.

Alpha B. Hall, Chief, Fairmount, W. Va.: Our off-duty firemen are called by the desk sergeant of the police department, who has a list of each man and his telephone number.

We have always had 100 per cent response.

Until our population increases along with manpower, I feel our method is very efficient.

There is no compensation for off-duty men for such emergencies.

We have one reserve pumper equipped with a good supply of reserve hose.

R. L. Rudd, Chief, Fort Smith, Ark.: The entire department is divided into thirds, with each operator having one third of the men to call. The operator on duty calls the two operators off duty telling them to call their list of men, and then he calls his third, thereby increasing the speed of calling off-duty men.

Our system has been very successful, with better than 95 per cent of the men responding.

The men are not paid for this emergency work.

We have several pieces of reserve apparatus that are manned by off-duty men.

E. G. Colglazier, Chief, Pueblo, Colo.: We have had very good success in response to a general alarm. It is compulsory for all firemen that are called when off duty to respond, unless they have a very good excuse. We are faced, however, with the problem of maintaining our record of prompt response, as we have recently experienced considerable delay in contacting off-shift firemen promptly by dial telephone.

Currently our organization, in conjunction with various other departments of the city, i.e., engineering, police, communications, etc., and the utility companies in town, is working on plans for a disaster committee, whose members would respond on call for any type of disaster. Five meetings have been held to discuss details, and work is progressing on a pamphlet, giving detailed instructions on how to contact key personnel in event of an emergency.

Off-duty men receive time and a half in pay or time and a half off, with a minimum of $5.00.

We presently have two extra pumpers;

THIS MONTH'S QUESTIONS

How do you call back off-duty firemen in the event of a large fire?

How successful has your method been (i.e., what percentage of off-duty firemen have responded in the past to calls for service at large fires)?

What suggestions do you make for increasing such response?

Do off-duty men receive additional compensation for such emergency service?

Do you maintain reserve apparatus in your department to be manned by off-duty men who respond.

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Safety Clothing for FIREMEN

The Original
STRIPED SAFETY COAT

- ☆ ***New Yellow Rubber Stripes!***
- ☆ ***Maximum Visibility!***
- ☆ ***Maximum Durability!***
- ☆ ***Exclusive Safety Features!***

YOU deserve the BEST PROTECTION OBTAINABLE for your hazardous work of protecting life, and property against fire. The Mackinaw Safety Coat with new yellow stripes is the answer! Highly visible stripes are rubberized as part of the material . . . not painted, glued or sewed on. Tests indicate that the new yellow, like black, retains its natural color and has the same durability.

There are many imitations but no substitute for the superior quality, design, fabric texture and safety features you get by specifying MIDWESTERN!

MIDWESTERN
COMBINATION SAFETY SUIT

The Midwestern Rubberized Coat and Bunker Pants make it easy for firemen to keep both warm and dry even in the most severe weather. Close fitting collar and elastic inner sleeve keep out sparks and water. Detachable wool lining. Pants have double-stitched seams, reinforcing rivets at points of strain, large roomy pocket space.

For complete information on our full line of safety clothing for firemen, see your Midwestern dealer. A letter to the factory will also bring you literature and materials for your inspection.

NONE GENUINE WITHOUT THIS TRADE MARK

MIDWESTERN SAFETY MFG. CO. Mackinaw, Illinois

Manufacturers of the Famous **MACKINAW Safety Coats**

however, we hope to increase this number in the near future.

W. B. Salyers, Chief, Covington, Ky.: The call-backs for all large fires are handled by the radio-telephone operator who calls the men by phone. We maintain a regular call-back list whereby key men are called first and follow down the line to privates. We do not have the list arranged alphabetical as we feel the key men can have the situation well in hand to direct and assist the regular men as they come in.

This method has worked out very satisfactorily. As an example, we had 105 men respond out of 109, so you can readily see the percentage is very high. This has also been true at most of our large fires.

Off-duty men receive no additional compensation for such emergency service.

We maintain reserve apparatus.

Eugene Ray, Acting Chief, Port Arthur, Tex.: Men are called by the dispatcher on orders from the officer in charge. Off-duty dispatchers are called first and report to the dispatcher's room to assist in dispatching and calling off-duty men by telephone.

I would say about 80 to 90 per cent of the off-duty men respond, depending on the time of the day or night the alarm is received. It is natural to assume that a small percentage will be out of the city, or for other reasons, cannot be reached by the dispatcher.

Our city pays time and one-half for hours performed other than the regular tour of duty.

We do have extra or reserve apparatus that could be used by off-duty men to replace companies that are in action. This reserve apparatus can also go into action at a large fire. However, we in this district have formed a mutual association for assistance if the necessity should arise. I might add that it has functioned on several occasions perfectly. It is known as the Sabine Neches Fire Chiefs Association. This association is made up of municipal and industrial plant protection chiefs. All law enforcement agencies are affiliated to set up road blocks and control traffic.

B. H. Brown, Chief, Macon, Ga.: This department is radio equipped, and has an officer in charge of radio alarm and four firemen operators. The operators rotate by shifts. The radio officer and operators report for duty whenever an emergency arises. They notify all off-duty company officers and chiefs by phone. The chief of fire prevention notifies the fire inspectors off duty. Company officers notify their men by phone. The phone numbers of personnel are kept up to date and in the radio room. All men must notify the radio operator of any change of phone number.

This method has been very successful and we have had about a 92 per cent response, allowing for sick and vacation.

The men receive additional pay for such services.

Two 750-gallon reserve pumpers are manned with off-duty men and officers and put on duty. This assignment is planned for each shift. The balance of off-duty men report to the fire and their respective company.

Frank L. Veasey, Chief, Cleveland Heights, Ohio: The alarm office alerts the company office of each company. The names are set up in a group and each man has a list. If the officer cannot be contacted, the next man in that group is contacted and he carries on calling the remainder of the group.

The last time we had to call off-duty men we had 29 out of 30 respond.

The off-duty men do receive additional compensation. This year the city passed an ordinance to pay the men by the hour for overtime.

The men report to the fire unless otherwise instructed. We do have two reserve engines, but have never had to call them in, due to the mutual aid agreements we have with bordering cities.

Ralph Neff, Chief, Alexandria, La.: The fire alarm operator calls off-duty station captains, who in turn, call their shifts to respond.

This method has not been very successful for only about 50 per cent of the men would respond.

The men are paid time and a half for such calls or as long as they are needed at a large fire.

We have a total of 95 men, about one-third of them on duty at all times. We work 60 hours and have five stations at

"I go for a DRAGON® FIRE PUMP every time!"

Give a fireman a choice and he's sure to go for the Dragon Fire Pump —the one designed from *his* point of view.

Dragon Fire Pumps come *completely assembled.* And because there's no pump packing to dry out, they're always ready for instant action, even after standing idle for long periods. The special harness is not only easy to get into, but designed so the pump rides high where it can't throw the fireman off balance or interfere with walking.

Dragon Fire Pumps fight fire *and* fatigue! Just a few easy strokes of the pump lever gives the operator a *continuous* flow of water he can direct right where it does the most good. And a mere twist of the shut-off nozzle gives either solid stream or spray *instantly.* What's more, a fireman using a Dragon Fire Pump can take his hands off both shut-off nozzle and pump lever to use rake, shovel, or other tool.

Specify Dragon Fire Pumps and get the pump designed with the *firefighter* in mind.

VALUABLE DISTRIBUTORSHIPS AVAILABLE, WRITE TODAY.

Dragon FIRE PUMPS

now available in 2 models

No. 150-S—Stainless Steel Tank

No. 150-G — Galvanized Tank: Cold-rolled steel, hot-dipped galvanized after fabrication.

All units equipped with brass pumps; all tanks seam welded. Capacity 5 gallons

DRAGON FIRE PUMPS meet Underwriters' Laboratories requirements and can be supplied with the UL label of inspection attached.

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PENNSBURG, PENNSYLVANIA

the present time, but are getting ready to build two more suburban stations and a new central station. We have in service two aerials, one 55 feet in length and the other 85 feet; four 750-gallon pumpers, one 1,000-gallon pumper and one 500-gallon pumper. Bids were recently opened for another 750-gallon pumper and a 1,000-gallon pumper. When the central station is completed, bids will be asked for still another 750-gallon pumper and a 75-foot aerial ladder truck.

John C. Long, Chief, Danville, Va.: If off-duty firemen are needed at a fire, we have our switchboard operator call them by phone. All firemen are required to have telephones in their homes.

We have been very successful in having off-duty firemen respond to calls. We usually get about a 99 per cent response.

Off-duty firemen do not get any compensation for call-back duty. This is understood when they are employed.

We have reserve apparatus for the off-duty men to operate and keep the stations in service.

Up to now we have not had any complaints to make about off-duty men not responding.

Walter L. Hydaker, Chief, Lima, Ohio: All members are required by city ordinance to have a telephone in their homes, and when it is necessary to call off-duty men back, it is done by telephone.

On all second alarms, the radio operator on duty at police headquarters notifies all off-duty fire fighters of the location of the fire, and to guard against a slip-up, the chief's driver checks to see that the calls are made. The relief crew that mans the extra pumper at the Central Station also checks the list to see that all off-duty personnel have been called.

Our percentage of response has been in excess of 90 per cent, which is excellent.

Off-duty men do not receive additional compensation for such emergency service.

George K. Carty, Deputy Chief, Burlington, Vt.: Off-duty firemen are called by phone. The fire alarm operator has a list of phone numbers for all members of our department.

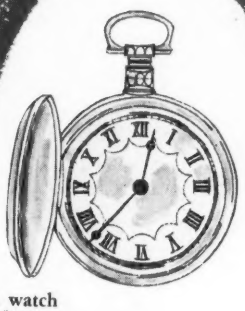
This manner of calling off-shift men has been very successful. We normally are able to contact all members who are within the city limits. Any member who wishes to leave the city must report this action to the fire alarm operator. The fire alarm operator, in return, checks the member out of town. In the event of a large fire, the operator knows which members are out of town and does not bother to call them. When they return to the city, they check back with the operator.

We are very satisfied with the response we have received from members of our department.

Off-duty men receive no additional compensation for such emergencies.

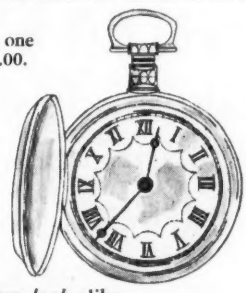
We maintain one 1,000-gpm pumping engine, one 500-gpm pumping engine and one 75-foot aerial ladder in reserve for members of the off-shift.

THEY LOOK ALIKE BUT THERE'S ONE IMPORTANT difference



This watch cost $150.00 . . .

and this one cost $15.00.



They *look* alike, but the more expensive watch will serve *faithfully* for many *generations* . . . the cheap watch will serve *erratically* for a few years—maybe months. *Which*, then is the "cheap" watch?

THE *SAFEST* INVESTMENT IS BI-LATERAL FIRE HOSE . . . IT COSTS *LESS* TO BUY THE BEST!

If you want *safety* AND *savings*, one way to be *sure* is to *look at the record!*

Bi-Lateral furnishes *FREE* hose record cards—send for your supply today.

Here's a sample piece of fire hose—it looks just like the piece below—yet . . .

This fire hose is worth 10 times—maybe 1,000 times—as much!

Bi-Lateral hose is built *up* to a standard not *down* to a price! There's a *reason* for Bi-Lateral—it's to put out fires! It will prove to be your most *economical* purchase as well as your *safest* investment!

(Bi-Lateral *IS* cheaper *in the long run*. Hose record cards prove it! Send for yours . . . free.)

Bi-Lateral FIRE HOSE CO.

20 NORTH WACKER DRIVE • CHICAGO 6, ILLINOIS

IN CANADA: Bi-Lateral Fire Hose, Kitchener, Ontario.

What's Burning?

The following list includes fires of $10,000 and over in the United States and Canada from May 22nd to June 22nd.

Phoenix, Ariz.—Russ Keaton's Save-Way Market destroyed; Lou Simon's Drug Store damaged.

Grossett, Ark.—Charcoal sacking plant of Grossett Chemical Co. damaged. Spontaneous ignition.

Antioch, Cal.—Portion of newly completed wharf Crown-Zellerback plant destroyed.

Belmont, Cal.—The Castle, mansion of Edward Turturici damaged. Arson.

Boulder Creek, Cal.—Theatre and adjoining properties damaged.

Crockett, Cal.—Home Laundry and dwelling of Lou Kenny, destroyed.

El Monte, Cal.—Dear-Bank Corp. automatic screw machine plant damaged. Sparks from sanding machine.

Jackson Valley, Cal.—Vernie Jack Lumber Mill destroyed.

Lake Tahoe, Cal.—Globins Hotel destroyed. Short circuit.

Montebello, Cal.—Lumber in storage yard used by S. A. Troxel Lumber Co., Phipps Lumber Co. and Bliss & Gates Lumber Co., as distribution point, destroyed. Arson.

San Mateo, Cal.—San Mateo Feed and Fuel Co. damaged.

Santa Maria, Cal.—City's firehouse damaged. Spark ignited gasoline.

Bunnell, Fla.—Greyhound Bus on U. S. 1, 10 miles north, destroyed.

Ashburn, Ga.—Sawmill at Scott Hearn Lumber Co., Turner County, destroyed.

Atlanta, Ga.—Wing of Hoke Smith High School damaged.

Gainesville, Ga.—Gene Tyner's Super Market No. 1 in Gainesville Mill village, destroyed.

Jonesboro, Ga.—Clayton County Public Works Camp destroyed.

Duquoin, Ill.—Home Lumber Co. plant damaged.

Effingham, Ill. — Maple Grove and Bryant schools destroyed. Arson.

Evansville, Ind.—Warehouse owned by Ohio Valley Hardware Co. destroyed.

Logansport, Ind.—National Bank of Logansport, newly remodeled building, destroyed.

New Albany, Ind.—Furniture plant and six private garages destroyed.

New Albany, Ind.—General Plywood Corp. destroyed.

South Bend, Ind.—Roofing material plant of U. S. Gypsum Co. destroyed.

Adel, Ia.—Building housing Rialto Theatre destroyed.

Jewell, Ia.—Building housing Dave's Place Tavern, Jack Spratt Grocery and Becker Home Furnishings store destroyed.

Keosauqua, Ia.—Two buildings owned by Barker Equipment Co. destroyed.

Versailles, Ky.—Dwelling of Mrs. Bolivar Bond damaged.

Alexandria, La.—Building housing bachelor officers at England Air Force Base damaged.

Union, Me.—Hillcrest Poultry Co. plant destroyed.

Bainbridge, Md.—Dwelling of Albanus Phillips, Jr., "The Cedars," damaged. Lightning.

Baltimore, Md.—Building occupied by Continental Midway Corp. damaged.

Adams, Mass.—Stanley Lumber, Coal & Grain Co. building, housing paint and hardware store, and sheds and dwelling; adjoining building housing store and tenements, all destroyed; grocery and meat store and apartments in building owned by Fritz B. Greilich and 12-family block owned by Mrs. Mary Lev, and other dwellings, damaged.

Lynn, Mass. — Breakers Hotel on beachfront damaged.

Stamford, Mass.—Shoe repair shop destroyed; architect's office, dentist's office, beauty salon and apartments damaged.

Battle Creek, Mich.—Grand Leader Department Store destroyed.

Muskegon, Mich. — Building housing Harry's Restaurant, Perkins Billiards and apartments destroyed.

Owosso, Mich.—Dean C. Woodward Furniture Co. plant damaged. Lightning.

Owosso, Mich.—Pioneer Wagon Works destroyed.

Kansas City, Mo.—Warehouse housing McGee Radio Co. and Rudy-Patrick Seed Co. damaged.

Lebanon, Mo.—Independent Stave Co. damaged.

Butte, Mont.—Snyder-Bacon Building housing Snyder and Bacon Machinery Co. and Rosenberg Furniture Co., adjoining McGrath-Doran coal yard storage building and sheds and dwelling of Fred Dolfi, destroyed.

Closter, N. J.—Fred Renten lumber storage yard damaged.

Kearny, N. J.—McLaren Recreation Bowling Alleys damaged.

North Bergen, N. J.—Charles Nash & Sons Terminal, Homestead Crossing, damaged.

Passaic, N. J.—Three stores destroyed.

Secaucus, N. J.—Lynch's Standard Wrecking Co. destroyed.

Woodbridge, N. J.—Christensen's Department Store, Woolworth's 5 & 10, Main Hardware Co. store and three others, damaged.

Bayside, N. Y.—Clarke Rug Cleaning & Carpet Co. damaged considerably.

Central Islip, N. Y.—Unoccupied laundry building of Central Islip State Hospital damaged.

Parksville, N. Y.—Stearon Hotel, resort, destroyed.

Warren, N. Y.—Dairy barn on Steve Skrambo farm destroyed.

West Sand Lake, N. Y.—Union Piece Dye Works Co. and two nearby utility buildings destroyed; Troy Yarn Co. damaged.

Kinston, N. C.—Kinston Motors Inc. damaged.

Sanford, N. C.—R. G. Hancock Planing Mill, near Bonlee, damaged.

Alliance, Ohio — Don Edwards Lumber Co. building destroyed.

Fremont, Ohio—Henry Automotive Parts damaged.

Lancaster, Ohio—Lancaster Froz-N-Food Locker Co. damaged.

KOHLER Electric Plants

...independent electricity for floodlights, power tools, rescue trucks, civil defense

MODEL 1.5M25, *1500 watts, 115 volt AC. Manual starting. 2500 watt AC portable models also available.*

Volunteer and municipal fire departments use the compact, portable Kohler 1500 watt model for floodlighting at night fires. Also operates pumpers, power tools, smoke eradicators, resuscitators, rescue equipment. Has 4 receptacles, pilot light, double carrying handle. Rubber-tired hand cart available. Other sizes, 500 watts to 35 KW, include stand-by models for sirens, alarm signals, communications, when central station power is cut off.

For civil defense, Kohler automatic stand-by plants safeguard lighting and communications. Portable models supply power for rescue trucks. Write for folder K-9.

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PLUMBING FIXTURES • HEATING EQUIPMENT • ELECTRIC PLANTS
AIR-COOLED ENGINES • PRECISION CONTROLS

Uhrichsville, Ohio—Clay City Pipe Co.'s three-story processing plant, three miles south, destroyed.

Xenia, Ohio—Warehouse in cordage plant of Hooven-Allison Co. damaged. Defective wiring.

Washington Court House, Ohio—Bakery of Pennington Bros. destroyed.

Comanche, Okla.—Addington Magnolia Mainline Pump Station, northeast, destroyed.

Hood River, Ore.—Jay Man Lumber Co. destroyed. Explosion.

Klamath Falls, Ore.—Diamond Lake Lumber Co. destroyed.

Newport, Ore.—A & M Buick Co. destroyed.

Oregon City, Ore.—Oregon Shingle Mill destroyed.

Portland, Ore.—Oregon Ship Yards destroyed.

Portland, Ore.—Gilbert Brosm Plumbing Co. destroyed; General Paint Co. damaged.

Portland, Ore.—Lombard Street Service Station owned by Jack Sherer, destroyed. Auto backfire.

Portland, Ore.—New Ryan Hotel cafe destroyed.

Donora, Pa.—Wholesale store and apartments damaged. Gas explosion.

Fernwood, Pa.—Building of Perfect Cleaners Corp. destroyed. Spilled cleaning solvent.

Hazleton, Pa.—Marsh-A-Line Co., dining room table manutacturers, destroyed.

Hungerford, Pa.—Hungerford Packing Co. warehouse containing tomato and onion production equipment and other miscellaneous items destroyed.

Philadelphia, Pa.—Rusoffs of Philadelphia damaged.

Narragansett, R. I.—Narragansett Casino, former playground, destroyed.

Knoxville, Tenn.—Dwelling of Mrs. Benjamin I. Harrison, Sr., destroyed.

Marshall, Tex.—Lumber mill plant damaged.

Christiansburg, Va.—Restaurant, grocery, barber shop, women's shop, department store and interior decorating shop destroyed; drug store damaged.

Snohomish, Wash.—Mel Robenstein's Chevron Station destroyed. Explosion.

Spokane, Wash.—Arthur's Budget Bridal Shop and Schuletin Boot and Shoe Store destroyed.

Tacoma, Wash.—McKinnons Department Store damaged.

Vancouver, Wash.—Hudsons Bay High School damaged. Spontaneous ignition.

Elkins, W. Va.—Science Hall on Davis and Elkins College campus destroyed.

Harpers Ferry, W. Va.—Baltimore and Ohio Railroad's mainline bridge across Potomac River, damaged. Hot journal box on crossties.

Huntington, W. Va.—Rich Chevrolet Co. Truck Sales and Service Center and two adjoining dwellings destroyed.

Morgantown, W. Va.—Mechanical Hall, Engineering Department building of West Virginia University destroyed.

Ketchikan, Alaska—Theold Red Men's Hall, Coliseum Theatre, bowling alley, cocktail lounge, liquor store, dress shop, beauty parlor and other businesses destroyed. Many damaged.

Lakefield, Ont.—Kawartha Hardware Store destroyed.

London, Ont.—News depot and nearby Dunn hardware and Circus Town stores damaged.

Calumet Island, Que.—Two general stores, feed mill and warehouse destroyed.

Ile Perrot, Que.—Funeral home destroyed; adjoining rooming house damaged.

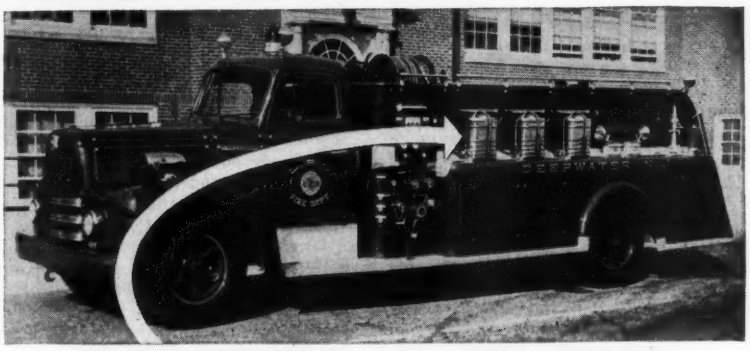
Montreal, Que.—St. Gabriel's Roman Catholic Church, Point St. Charles district, destroyed.

Quebec, P. Q.—Building near Place Parent housing stores, offices and storage space, damaged.

Pay Raises Approved For L. A. Firemen

Final approval was given, May 25th, for an 11.2 per cent pay increase for 7026 Los Angeles, Cal., firemen and police.

The raise purportedly makes them the highest paid in the nation. Rank and file members of the two departments will get pay increases of $49 a month, bringing them into a bracket ranging from $440 to $489 per month. ***Paul C. Ditzel***



INDIAN

FIRE PUMPS Complete Your Truck Equipment . . .

H. & H. Fire Apparatus Co., of Jersey City, N. J., built the above truck delivered to Deepwater Fire Department, Deepwater, N. J. It is equipped with chrome plated **INDIAN FIRE PUMPS.**

Famous **INDIAN FIRE PUMPS** are standard equipment on more and more new fire trucks. They have no equal for fighting so many types of small fires. They belong on *your* trucks, too.

"THERE IS NOTHING ELSE LIKE THEM"

"We have 6 of your **INDIAN FIRE PUMPS** on one of our fire trucks and we have used them 8 years. They are still **just like new.** They are the best things a fire department can have. I have used them for everything, including grass, house, barn, rubbish and many other kinds of fires. We like them very much. **There is nothing else like them.**"

EARL L. KOCH, Assistant Chief
Ann Arbor TWP F. D.,
Ann Arbor, Mich.

INDIAN FIRE PUMPS are approved by UNDERWRITERS' LABORATORIES

No. 90 Sliding Pump Type
(illustrated)

For all Class A fires and many Class B fires. Fire Chiefs say INDIANS are "worth their weight in gold."

Also available as No. 80 with lever type pump and handle.

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Among the Buffs

By Paul C. Ditzel

LAST MONTH we described a unique mutual aid operation by two Baltimore fire fan clubs and now Doc Levin, the Sage of San Francisco's Phoenix Society, steps forward to report an interesting parallel.

Phoenixite Joe Connell, erstwhile art patron, scholar and baseball fan was watching a ball game on television one quiet Sunday afternoon recently across the pond in Oakland, which to most San Franciscoans is a nasty word.

Suddenly the cameras switched from the diamond to a rip-snorting four-bagger not far away. Joe immediately tipped off Oakland's Buff Bryan Thompson by telephone and Bryan was off to the blaze in a swirl of cinders.

Speaking of our intrepid buffs brings to mind one J. Jay (Shorty) Wright without whom no Buffalo, New York, fire would be complete. Shorty recently was the star of a well-written profile by Dick Hirsch in the *Buffalo Courier-Express*.

I well remember Shorty from my days both as a Buffalo buff and a reporter for the *Evening News* in that city. Shorty, complete with his turnouts and helmet, was always aboard when the 2-2 Signal hit. I'll never forget Shorty who is so small he looks like a pair of boots walking by themselves, and Buff Carl Hitchcock at a third alarm on Hickory Street —the night a hoseline burst. But that's another story.

Shorty has chased Buffalo fires for 37 years and though he's in his seventies he looks closer to 50. President Carl Roesch of the Buffalo Fire Fighters Association, Local 282, AFL-CIO (and also one of my track coaches in the days when I warmed up for track meets by running after Engine 34) recently presented Shorty with an honorary association membership on behalf of the association members.

Another fire fan who has been in the news recently is Dr. Lester L. Williams of Colorado Springs, Colorado, whose story and picture appeared in *The Denver Post*. The good doctor has prescribed the hobby for his handsome young sons, Jeff and Clint. Jeff himself made the Santa Maria, Cal., paper recently by his amazing knowledge of things firemanic.

Our good pal, Geoffrey F. D. Pratt, editor of *Fire Protection Review*, Bouverie House, 154 Fleet Street, London, E.C. 4, England, says he has very regretfully been forced to raise the annual overseas subscription rate for his magazine which many buffs in this country read. The new rate is $3.50 which also includes the annual yearbook—a volume that is worth the annual subscription price itself.

A recent issue of Geoffrey's excellent magazine describers an unusual water-operated alarm system in use some years ago in Marlborough. A bell above the town hall roof called out the brigade in this manner:

A water pipe led up the side wall of the building to a pelton wheel. A stopcock was placed in the pipe near street level and when it was opened water would flow up the pipe under pressure and ring the bell.

All of you have no doubt heard of the tragedy which struck the New York Fire Department recently. The Third Alarm Association of that city published a memorial issue containing a rather extensive rundown of the fire and structural collapse which killed six firemen and injured many others. Editor Barclay G. McKeough, 43 Riverview Avenue, Ardsley, N. Y., and Associate Editor Al Schuman prepared this special three-page issue.

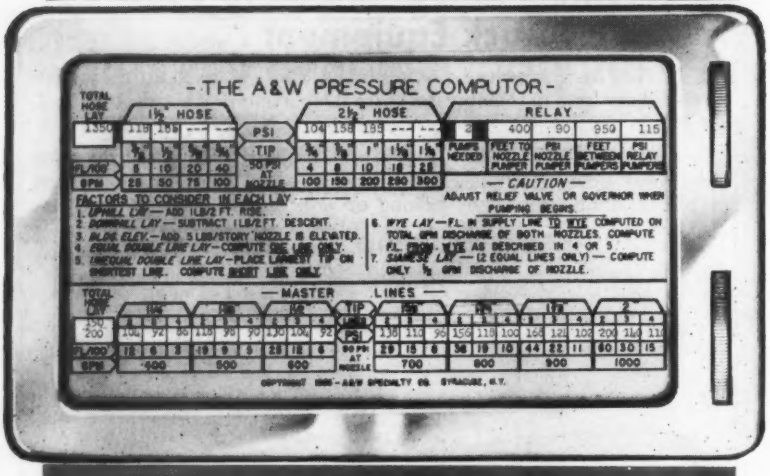
Time for some of the mail:

Jim McCall, 4713 North Paulina Street, Chicago 40, Illinois, hopes to trade or sell color slides of fire action with other buffs. He also works in black and white as you may recall from this column some time back.

Carl Hunsaker, Box 85, Camp Point, Ill., is only 15 but he's managed to stow his camera and film in No. 1 Pumper and probably could trade pictures of his volunteer department's rigs with any comers.

A friendly letter from William H. Crystle, 512 Media Parkway, Garden City, Chester, Pa., looks for information on the game "Squirt Ball" that firemen play with 1½ inch lines and a large rubber ball. Bill is a volunteer firemen and would appreciate hearing from anyone who has

A turn of the dial solves any pump pressure problem in a few seconds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7. SIAMESE LAY — (2 EQUAL LINES ONLY) — COMPUTE ONLY ½ GPM DISCHARGE OF NOZZLE.
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The A & W PRESSURE COMPUTOR

- **PUTS EFFECTIVE STREAMS ON THE FIRE FASTER**
- **PAYS FOR ITSELF BY CUTTING PUMP, GAUGE and HOSE DAMAGE**

If you know your hose lay and tip size, the A & W Computor gives you exact pumper pressures in seconds . . . just by turning the dials. No more guess work, no mental computations, no time or water lost while experimenting with different pressures. You get the answer immediately . . . and you know it's accurate.

- Gives exact pressure settings to produce 50 PSI nozzle pressure on all 1½" or 2½" hand lines from 50' through 1500' for tip sizes from ⅜" through 1¼".
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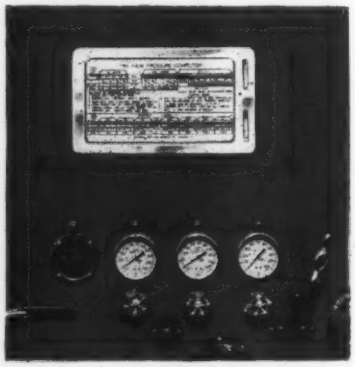

Mounts quickly and easily on any pumper

Face size only 6" x 11". No connections except for lighting. Trouble-free, built to last. Chrome plated, water-sealed.

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rules or other information pertaining to the game which I believe is played by Santa Monica, Cal., firemen among others.

Gil Jory, 34 East Wheeling Street, Baltimore 30, Md., is a free lance buff in that fire-conscious city and has prepared a brochure on the Baltimore Fire Department which he is offering for sale.

One of our best fire fan clubs recently headlined a story about a 5-11 and one special alarm fire in Chicago as "A Spark's Delight." While I'll probably be considered cantankerous for taking exception to this headline, I do submit that it was in incredibly poor taste and could only result in adverse notice to the true buff who experiences a fire prevention expert's regrets with every fire, especially the major ones.

On that note I'll strike this column out for another month. This open forum will hold sessions again next month via 419 Napoleon Street, Playa del Rey, Cal.

World-Wide Fire News

Cold War Creates Hot Fire Fighting Problem

If you think some American areas are plagued by overlapping and intermixed fire districts, jumbled telephone communications and conflict of authority, ponder the city of Berlin, Germany.

The cold war makes fire a greater hazard on a street called Leuschnerdamm. Residents fear their houses would burn to the ground before Communist and anti-Communist fire forces could agree on their jurisdiction.

The houses on Leuschnerdamm lie in the American sector of the city. But the street is in the Soviet zone. West Berlin's Fire Department may not use the East Berlin street without permission. And the Communist fire department has served notice that the houses are outside its jurisdiction.

Over on Waldemarstrasse the situation is reversed. The houses are in East Berlin, the street in West Berlin. And there you have it!

The confusion is found in communications, also. The East-West border which runs right across squares, streets, rows of houses, interrupts telephone contact between areas, and area fire forces. There are no telephone lines between East and West Berlin. A West Berliner who wants to call the fire department, it's said, must route his call through the West German city of Frankfurt, 40 miles away.

Yes, indeed, strange things can and do happen in a city with two city governments, two fire departments, two police departments, two currencies and two of almost everything else connected with government.

From the World News Ticker

Japan continues to burn. Early on May 30 about 350 guests fled to safety when fire destroyed the Kogure Inn, largest

a NEW 35 ft.

ALCO-LITE

pumper extension ladder

For old and new short wheelbase Pumpers.

The Alco-Lite 3 Section Extension Pumper Ladder offers a lot of length in a minimum amount of nesting space. It has extra heavy, 1¼", deeply grooved rungs which cannot twist, turn, or break off. It is the only aluminum fire ladder on the market that offers a rope and cable arrangement which allows the sections to extend easily and simultaneously. Spring loaded locks operate automatically at any desired point. Always specify Alco-Lite Aluminum Fire Ladders. You can depend on them.

This new Pumper Extension Ladder is available in 30' and 35' models.

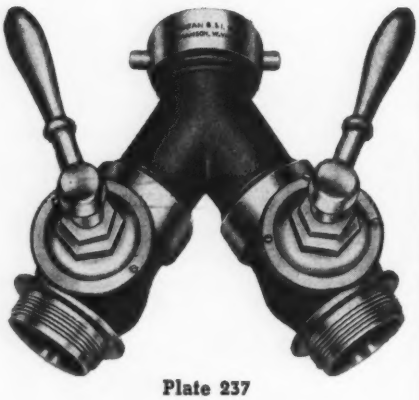
Aluminum Ladder Company

WORTHINGTON PENNSYLVANIA

hotel in the hot springs resort town of Ikao, near Shibukawa, with heavy loss. . . . One person was killed and 536 made homeless by a fire which destroyed 53 houses in Aomori, northern Japan port city. . . . Fire virtually destroyed the town of Tokiwa (pop. 7,000) in Japan's Fukushima prefecture. . . . Whipped by a 50-mile gale, flames devastated the lumbering town of Ichinohashi, destroying 200 of the community's 350 homes. . . . Late in May, nine forest fires swept through England's parched thatched roof country, threatening towns and blocking communications. Worst blaze laid 2,000 acres waste in Dorset, 100 miles southwest of London. Villagers fought to save homes with buckets and backfires were resorted to. The army called out 1,000 troops to help fire brigades. . . . Eleven British soldiers were killed when an army munitions store exploded May 16 at Takoradi, 120 miles west of Accra, Gold Coast. About 30 soldiers were reportedly near the store at the time of the blast. Many others were injured. . . . In this country, an explosion destroyed an ammunition storage igloo at the isolated Anniston, Ala., Ordnance Depot, May 17. Blast set fire to six acres of timberland. Igloo, an underground storage vault, was filled with salvaged gunpowder. . . . A wing tank fell from a jet fighter plane and exploded near an apartment house in Fairbanks, Alaska, on May 14 and flaming fuel splashed over two children, both aged 4, at play. The girl died of burns and the boy was in critical condition. . . . In Perth Amboy, N. J., two young boys explaining to firemen why they turned in a false alarm, said they arrived only two weeks before from Italy. Another boy told them to open that red box and pull the handle and went away "rapidamente," they said. . . . Another yarn involving an Italian deals with truck driver Antonio Mileodi of Bari, Italy. Full of woes—and mebbe red wine—he bought a revolver to end his worries. But he couldn't decide whether to shoot himself, his business partner, or both. So he finally settled for shooting up the gas tank of his parked automobile, setting it afire. The firemen weren't pleased—neither were the police. Hoosegow for Mileodi. . . . The pilot's compartment of a Trans World Airlines Constellation was charred by fire when an oxygen bottle exploded in the hands of the engineer while he was making a pre-flight inspection. No passengers were aboard and only the engineer was injured. . . . Britain will build a pilot plant to produce gas from coal burning underground, according to Aubrey Jones, Minister of Fuel, reporting to the House of Commons on June 4.

POWHATAN DOUBLE HYDRANT GATE VALVES

Quarter-Turn



Female inlet—2½", 3" or 3½". Male outlets—2½". Pin lug or sensible lug swivel. Rough body, painted red with polished bronze or chromium plated trim.

Plate 237

Short body apparatus type. Female inlet—4", 4½", 5" or 6". Male outlets 2½". Pin lug or sensible lug swivel. Rough body painted red with polished bronze or chromium plated trim.

Plate 238

POWHATAN BRASS and IRON WORKS

RANSON, WEST VIRGINIA

Phones 93 & 94 Charles Town West Virginia

Established 1892

London Firemen Win 24-Hour Air Raid Shelter Fire

Flames raged through a maze of tunnels, part of an unused subway junction 150 feet under downtown London on May 22 last. The complex honeycomb of shafts was part of the bomb shelters which had been used by General Dwight D. Eisenhower's signal headquarters during World War II.

London firemen employed coal mine tactics to fight the stubborn blaze which broke out in the tunnel network from an undisclosed cause. The tunnels have been used following the war as a downtown hostel for British troops bound overseas. There were sufficient combustibles to create considerable heat and heavy smoke and fumes.

Fire fighters used respiratory protective equipment and various forms of smoke removers in an effort to reach and extinguish the fire. Thirty-six firemen were injured in the 24-hour long struggle.

Rockland County Volunteers to Grant Scholarship

The Rockland County, N. Y., Volunteer Firemen's Association will grant a fully-paid scholarship in Fire Protection Engineering at the University of Maryland, School of Engineering. The Scholarship Committee, consisting of William Paul Babcock, Nyack, Chairman; Charles H. Draudt, Valley Cottage, and Jerome M. Kornfeld, Suffern, has invited the Rockland County Chapter, American Society of Professional Engineers to assist inn the selection of the best candidate from recent graduates of Rockland County high schools.

Obituaries

J. F. McDonough, Former Boston Chief

John F. McDonough, former Chief of the Boston, Mass., Fire Department died on June 1 at the age of 75.

Chief McDonough succeeded Chief Napeen Boutelier in 1948. At the time of his retirement in 1950, he had been a Boston fire fighter for 52 years. He started his career at Engine 32, Charlestown, while horse-drawn apparatus was still in vogue. He was promoted to lieutenant in 1921, and in 1924 he rose to captain. In 1927 he was made district chief and in 1936 advanced to deputy chief.

During his long career, Chief McDonough fought many serious fires, including the tragic Cocoanut Grove holocaust of November 28, 1942. A deputy chief at the time, he ordered the fifth alarm.

Chief J. T. Wallace of Bourne, Mass.

Bourne, Mass., Fire Chief J. Thomas Wallace died unexpectedly June 10, 1956 at the age of 59.

Chief Wallace was prominent throughout the Cape Cod and New Bedford areas as a fire official and guest speaker. He resided in Buzzards Bay, Bourne Township all his life and was for 20 years head of its fire department. Only as recently as June 8 he had directed fire fighting operations at a woods fire.

Chief Wallace started his services as a police officer in the Town of Bourne, later joining the fire department. He served as assistant chief until his appointment as chief in 1936.

He was active in many fire service organizations, including the International Association of Fire Chiefs, New England Association of Fire Chiefs, Massachusetts Fire Chiefs Association, Barnstable County Fire Chiefs Association, Veteran Firemen's Association of New Bedford and Cape Cod Foresters. He was also prominent in Civil Defense.

Freak Accident Fires Car, Kills Driver

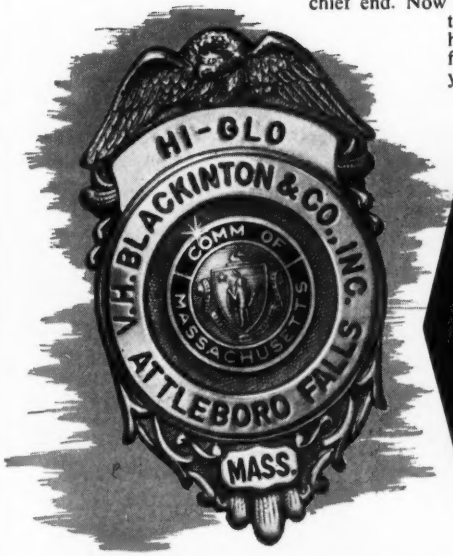
Ralph Simpson, an auditor in the Internal Revenue Service at Steubenville, Ohio, was the victim of a freak accident that should have turned out better, according to the interpretation placed upon the tragedy by the coroner.

Mr. Simpson's car went into a ditch near Cadiz, Ohio, the night of June 7. Alone in the vehicle, he spun the wheels trying to get the car out. Friction from the reaved up rubber ignited the tires and the fire reached the upholstery. The car windows were closed and Simpson apparently suffocated from the fumes.

The body was found by a boy going to work in a farm field the following day.

This is an OPTICAL ILLUSION

Baffle your friends with this easy handkerchief trick. You appear to knot your handkerchief loosely, but when you pull the ends to tighten it, the knot mysteriously vanishes. The secret? — after you have tied the knot, position the left thumb as illustrated. Then bring down your forefinger to "A", grasping the portion of the handkerchief your thumb is touching, while your second and third fingers hold the handkerchief end. Now draw your hands quickly apart as if to tighten the knot, keeping a firm hold with your left thumb and forefinger. The knot will disappear and your friends will gasp!



This is the REAL THING!

When you want a top quality badge, don't be fooled . . . insist on the real thing. A BLACKINTON badge is just as special as it looks — it *has* to be to pass BLACKINTON's traditionally high standards. BLACKINTON — a name you can depend on for badges.

Ask your equipment supplier to show you the new Hi-Glo badge — it's the badge you can polish, polish, polish. Hi-Glo is the badge with the hand set ruby colored stone in the eye of the eagle — you should see it.

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V. H. BLACKINTON & CO., INC., ATTLEBORO FALLS, MASS.

BADGES AND UNIFORM INSIGNIA FOR EVERY SERVICE AND INDUSTRY

Questions and Answers

wherein are answered questions relating to current problems in the fire protection

Testing Water Mains

To the Editor:

We have 1300 feet of 16-inch pipe which we wish to test at a pressure of 150 to 200 psi. The elevation of one end is 125 feet higher than the other. We intend to connect our pumper at the low end of the pipe.

Would it be possible for a 625 Imperial gpm centrifugal pump to perform this test? If so, how long would it take to fill the pipe? Do you think it would be better to perform the test by air pressure?

E. L. M.

Answer: Assuming that some form of bleeder valve is used at the upper end of the pipe to allow air to escape as the water enters (to prevent faulty pressure readings) your pumper can perform the test if it is in good condition. The 1300 feet of 16-inch pipe would have a capacity of approximately 1815 cubic feet of water or about 10,900 Imperial gallons (13,600 U. S. gallons). Pumping at a capacity of 625 Imperial gpm, it would require about 17½ minutes to fill the pipe.

When filled, the bleeder valve should be closed and a pump pressure of 204.25 psi (205 psi) maintained. This will give 150 psi at the top of the pipe. The differences in pressure readings is due to the 125 feet of head which at .434 pounds per foot would amount to 54.25 psi at the lower end of the pipe. The pump must necessarily maintain higher pressure to overcome this gravity pressure and obtain 150 psi at the top of the pipe.

Testing by air pressure would be more difficult. It is a comparatively simple procedure to make all joints water tight but not air tight.

Head-on vs. Side Collisions

To the Editor:

I would like to know whether FIRE ENGINEERING has made a survey concerning collisions on or of fire trucks. If so, I would thank you to advise me as to the per cent of head-on as against side collisions.

C. M. B.

Answer: FIRE ENGINEERING has published numerous accounts of collisions both between units of fire apparatus, and fire vehicles and other types. The question of apparatus accidents as related to types of vehicles is well covered in our Round Table (issues of March, April, May, June, July and August, 1955). However, no survey of specific kinds of accidents and/or collisions has been made.

Reference to FIRE ENGINEERING data on this subject, offers strong evidence to the effect that the large majority of collisions between fire apparatus and vehicles of any kind are not head-on, but rather, quartering or at right angles. This is due no doubt to the fact that at the moment of impact both vehicles were being swerved to avoid the crash.

Lumber Yard Hazards

To the Editor:

Will you please outline the hazards inherent to lumber yards and the precautions to be taken in fighting fires in such occupancies?

Lieut. H. B.

Answer: Summing it briefly, the hazards attendant to lumber yards are as follows:

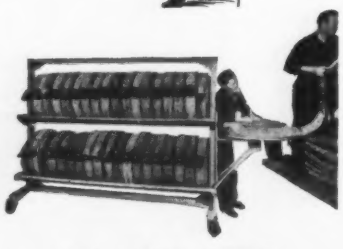
1. Concentrations of highly combustible Class A material. May be in conjunction with building material yards, coal pockets, feed mills and or manufacturing plants.

2. Usually such yards cover large tracts

ON THE FIRST PITCH!

PORTO-RAK HOSE STORAGE and LOADING UNIT

Since its introduction just a few months ago—Porto-Rak has been enthusiastically received. Saves valuable space. Holds 1800 ft. of 2½" hose —proportionately more of 1½"—in an 8 ft. space (when loading table is detached). Roll it right up to the truck for complete hose reload—out of the way when not in use. Equipped with locking fiber wheeled casters.



FIRE HOSE DRYER

The patented, electrically operated Circul-Air hose dryer circulates prewarmed fresh air through loosely coiled hose at the rate of 5 to 6 air changes per minute. Saves floor space, hard work and lengthens hose life. No other drying method is so fast—so economical—so easy to use. Circul-Air is the preferred drying method in over 4,000 leading Fire Departments.

ACCEPTED—APPROVED—RECOMMENDED

Approved by Underwriters' Laboratories . . . and Canadian Standards Association. Recommended by all leading fire hose manufacturers.

UL LABORATORIES APPROVED SA

NEW *Roto-Jet* HOSE WASHER AUTOMATICALLY WASHES — RINSES — DRAINS HOSE

ROTO-JET Washes, Rinses, Drains hose thoroughly and quickly. Hose is self-propelled. Simple one man operation. With or without detergents ashes, dirt, mud and sludge are automatically scrubbed out and flushed away. Saves time. Lengthens hose life. Now . . .Foot Pedal Operation.

WRITE FOR FOLDER

THE CIRCUL-AIR CORPORATION 575 EAST MILWAUKEE DETROIT 2, MICHIGAN

of land, sometimes entirely outside municipal fire protection. Storages may be encountered within built-up areas of cities, constituting special exposure hazards.

3. Locations may be near steam railroads with consequent danger of sparks from locomotive.

4. Experiments in converting wood wastes into plastics are being made at some lumber yards. Dip tanks in which lumber is impregnated as a preservative are becoming common. These may present special hazards.

5. Large amount of heat generated in lumber fires may seriously threaten exposures and make it difficult to bring streams to bear upon the fire.

6. Flying sparks, embers and brands may develop contact fires over a wide area.

7. The number of hose lines required to fight such fires and protect exposures may tax all available fire fighting facilities and manpower.

8. The amount of water required may exceed available supplies. Lumber yards are frequently located in districts having little or no domestic water supplies. Dead-end mains and long intervals between hydrants, may be encountered, necessitating long hose stretches and possibly relay operations.

9. Such fires may destroy poles carrying power, light and telephone wires, endangering communications and fire fighters.

10. Fires involving such large areas call for special fire department communications equipment, such as portable pack radio (walkie talkies) and voice amplification.

11. Lumber yard fires present special hazards to fire fighters because of the heat generated, possible exhaustion caused by hauling long hose lines, falls from lumber, burns from radiated heat as well as from sparks, flying embers and inhalation of heavy smoke.

Answering the second part of your question the following precautionary measures should be considered.

1. Quick sizeup of the extent of fire, its location and severity, the weather conditions life and property exposures, and conditions under which you must operate (manpower and equipment available for the action).

2. Call additional help if conditions indicate.

3. Make use of all available private fire protection facilities in yard, mill or other occupancies related to the lumber installation. Many large lumber outfits have yard hydrants, hose houses and equipment, monitor nozzles permanently mounted, water barrels, pails, etc.

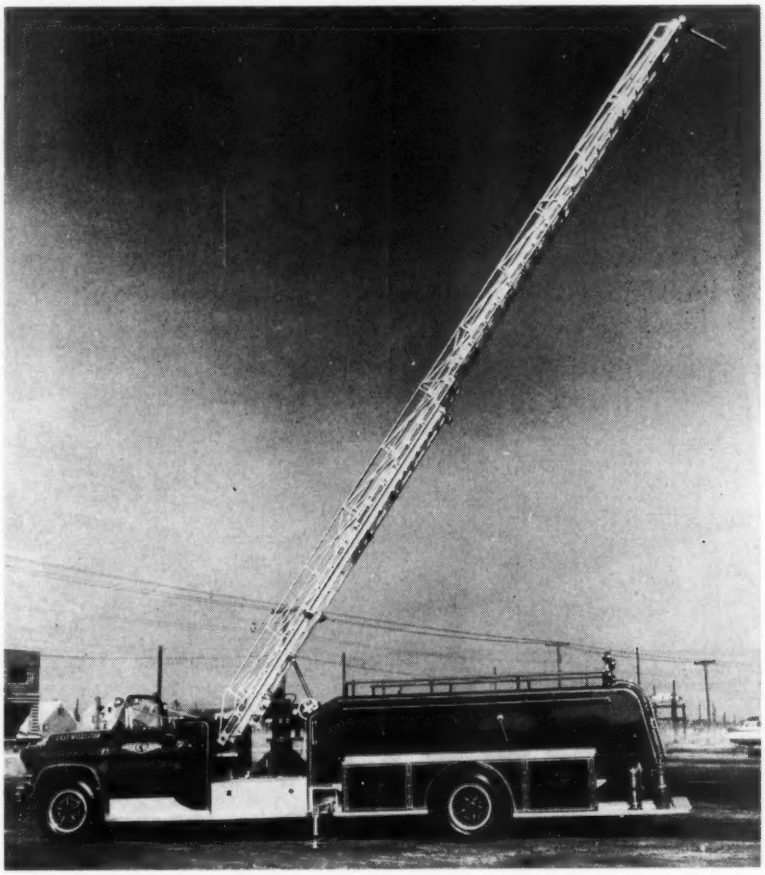
4. Deploy forces so as to best cover immediate and possible later exposures.

5. Take advantage of the wind where possible, particularly where volume water fog can be delivered on the fire using

MEMCO AERIAL LADDER

Your community need no longer sacrifice its fire fighting efficiency due to the lack of aerial apparatus, which heretofore has been beyond the financial reach of so many small fire departments. THE MEMCO AERIAL LADDER is the answer to your problem—it is within the financial reach of even the smallest department.

The MEMCO AERIAL LADDER may be mounted on a truck you already have in service—a commercial chassis with a flat bed, or your fire truck manufacturer will incorporate it into a piece of combination apparatus.



The community of East Williston (L.I.N.Y.) is the proud owner of this MEMCO AERIAL LADDER (see picture) which was incorporated into this combination piece of apparatus by Approved Fire Equipment Company, Island Park, L.I.N.Y.

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UP TO 40 GPM AT 150 PSI

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air currents. It may be impossible to operate directly in the lee of the main body of fire, in which case efforts should be made to flank it, utilizing every favorable fire break or other barrier. Don't forget that such hot fires can travel against the wind, also there may be a sudden shift in the wind.

6. Such fires usually call for heavy calibre, or master streams, supplemented with hand lines where available, the latter to protect exposures. There is a tendency, particularly when many outside fire units are rolling in on mutual aid calls, to use too many hand lines, insufficient in pressure and volume, thereby bleeding the water supplies and making it difficult to operate the desired number of master streams.

7. Use aerial ladders and ladder pipes to set up water curtains and to reach critical points within the body of the fire (to gain range of streams), as well as to protect serious exposures. Water curtains may be thrown up by impinging heavy streams.

8. Employ heavy calibre water fog to protect personnel and cover their exposed defense lines. Improvised shields of doors, metal sidings or tarps also may be employed to enable hosemen to hold their positions.

9. Institute patrol measures to guard against flying brands and exposure fires using police and volunteers, if necessary, paying particular attention to downwind areas. Roving booster and other fire units should cover threatened areas, if available.

10. Evacuate tenants from exposed housing. Have entire area policed to permit free movement of fire forces.

11. If necessary, request public broadcasting stations to notify citizens to shut down lawn sprinkling and all other unnecessary uses of water in order to maintain highest possible water supplies needed to fight the fire.

12. Keep a sharp lookout for evidences of arson (many lumber yard fires are set).

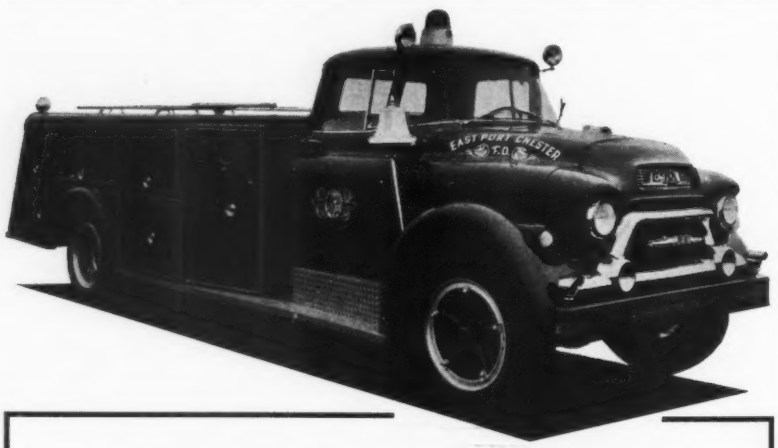
13. Don't overlook thorough overhauling. With tired crews there may be a tendency to curtail final mopping up, leading to repropagation of fire. Fire may bore into stacked lumber, only to break out after the pile has been considered extinguished. It may be necessary to remove stocks board by board, under water sprays. Watch lines should be maintained until all possible danger of rekindle is past.

14. Small fires in sawdust and limited lumber storage may call for use of wet water, if available.

15. In such fires it may be difficult to keep forces together and under supervision, and in touch with command posts. Possible shifts in the wind which might entrap personnel and equipment should be anticipated in laying in lines and setting up defense. Once long lines are stretched it is almost impossible to redeploy them. Lumber yard fires frequently cause loss of hose and equipment by necessitating hurried retreat. Having good communications in particular, portable radio, is vital in such fire control operations. Reliance cannot be placed on telephones, which may be burned out.

16. If possible, have reserve forces available that may be thrown into the action where weakness develops in defense. Of course off-shift personnel will have been called into action and mutual aid forces alerted, if the situation indicates.

17. Prefire layouts of all lumber yards and related hazards should be prepared, with routes of approach, yard lanes, water supplies (if any) and other details, and this data made available, to all first due units and commanding officers. Frequent inspection of such premises should be made by proper fire department authorities. Any locked gates or other barriers to entrance into the grounds or sheds should be noted.



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Squad & Salvage Trucks • Aerial Ladders • Airport Crash Trucks

That Word Again . . .

On April 30 fire destroyed a warehouse in East Greenville, Pa. Listed among the items of the $12,500 loss were 400 rolls of fireproofing material.

NEW YORK MEETING

Continued from page 582

Monte Lass, Oswego Fire Department and Otto E. Friskie, Milan Fire Department, participating. Concluding the program was a discussion of "The Management of Men," by Henry J. McFarland, Director of Municipal Service, New York State Civil Service Commission, and the Honorable Mary Goode Krone, Commissioner, New York State Civil Service Commission.

Elected to office for the ensuing year were: Chief Howard Harrington, Baldwinsville, N. Y., President; Chief Edward J. MacDonald, White Plains, N. Y., First Vice-President; Chief George H. Fornoff, Kenmore, N. Y., Second Vice-President and Chief Ward H. Bohner, Oneida County Fire Coordinator, Utica, N. Y., Secretary-Treasurer.

Headlining the annual banquet was the Honorable Oswald D. Heck, Speaker of the New York State Assembly, who assured the convention of the support of the legislature in resolving problems concerning the fire service.

May Fire Losses

Estimated fire losses in the United States during May amounted to $87,681,000, the National Board of Fire Underwriters has reported.

According to Lewis A. Vincent, NBFU's general manager, this $87,681,000 loss represents an increase of 22.1 per cent over losses of $71,789,000 reported for May, 1955, and continues the trend that has been noticeable since the first of the year.

Losses for the first five months of 1956 now total $442,633,000, an increase of 11 per cent over the first five months of 1955, when they amounted to $398,929,000.

These estimated losses include an allowance for uninsured and unreported losses.

Busy Phone + Faulty Pumper = Total Loss

A spectacular fire, visible 10 miles away, destroyed the general store of Albert Boisvenu, Orleans, Ont., on May 1. Merchandise valued at $55,000 was consumed in less than two hours.

Mrs. Jacques Viau, daughter of the owner, tried to report the fire. The rural line was busy and the parties using it refused to hang up. According to Mrs. Viau, it was ten minutes before she could contact the fire department. Further regrettable delay occurred because the local fire truck which had broken down three weeks before, was still out of commission.

By the time the neighboring Gloucester Department arrived on the scene to assist, the fire had gained such headway that all efforts were directed to protecting exposures. Only the cash register, some account books and a few personal effects were saved.

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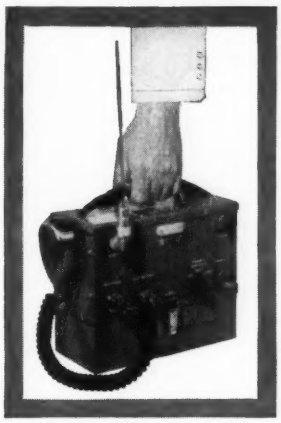
The Model H/M Pak-Fone is being widely accepted by Police and Fire Departments because it does not require holding a handset to the ear. Also, the annoying "rushing" characteristic of other hand carried portables on standby is eliminated by the use of a relay squelch.

Write or wire today for a demonstration in your community or send for literature.



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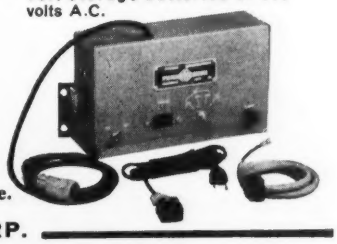
New power supply operates Pak-Fone and other portable 2-way radio equipment from 6, 12, and 24 volt storage batteries or 117 volts A.C.



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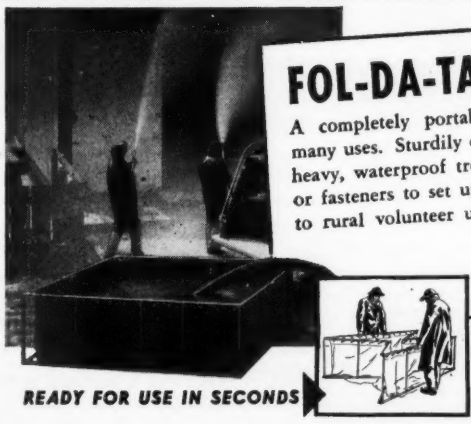

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Schools and Conferences

July 18-21—**Washington Fire Training Conference.** Annual meeting, Everett, Wash. Director, Captain J. R. Cook, Conference Supervisor, Washington State Firemen's Association, 1712 Harvard Avenue, Seattle, Wash.

July 20-21—**Hudson-Mohawk Volunteer Firemen's Association.** Annual meeting, drill contests and parade, Rensselaer, N. Y. Secretary, Harold A. Gass, 3058 Albany Street, Schenectady 4, N. Y.

July 21—**Central North Shore Volunteer Firemen's Association.** Annual invitation drill and parade, Central Islip, N. Y. For information, contact Captain John S. Brewer, 96 Carleton Avenue, Central Islip, N. Y.

July 21—**International Fireman's Day.** Annual meeting, Gananoque, Ont. Secretary, Gerald F. Hampton, Gananoque, Ont.

July 23-25—**Western New York Volunteer Firemen's Association.** Annual meeting, emergency first aid tournament, drill contests and parade, Batavia, N. Y. General Convention Chairman, Fred G. Wolf, P. O. Box 130, Batavia, N. Y.

July 23-27—**West Virginia State Fire School.** Annual meeting, Morgantown, W. Va. Director, R. E. Hanna, Jr., Supervisor, Fire Service Extension Schools, West Virginia University, Morgantown, W. Va.

July 23-27, Sept. 24-28—**Pennsylvania Fire School**—Standard Fire Fighting Course, to be held at Lewistown, Pa. Director, Arthur Espey, Box 631, Lewistown, Pa.

July 26-28—**Montana State Firemen's Association.** Annual meeting, Livingston, Mont. For information, write Assistant Chief C. C. Welling, Fire Headquarters, Livingston, Mont.

July 27-28—**New York-Penn Firemen's Association.** Annual meeting, Horseheads, N. Y. General Chairman, Chief George Sullivan, Horseheads, N. Y.

July 31-Aug. 3—**Michigan State Fire Chiefs' Association.** Annual meeting, Grand Rapids, Mich. Secretary, Chief Harry L. Ridout, Fire Headquarters, Muskegon Heights, Mich.

Aug. 1-3—**Southwestern New York Association of Volunteer Firemen.** Annual meeting and parade. Gowanda, N. Y. Secretary, Samuel J. Beckman, Versailles Road, R. F. D. No. 1, Lakeview, N. Y.

Aug. 3-6—**Ontario Provincial Firemen's Association.** Annual meeting, Port Colborne, Ont. For information contact Chief Frank T. Dimond, Port Colborne Volunteer Fire Company, Port Colborne, Ont.

Aug. 6-11—**Pennsylvania Fire School.** Annual meeting, Lewistown, Pa. Director, Arthur Espey, Pennsylvania Fire School, Lewistown, Pa.

Aug. 6-31—**Florida State Fire College.** Four weekly sessions, Ocala, Fla. Director, W. H. Barnett, Superintendent Florida State Fire College, P. O. Box 785, Ocala, Fla.

Aug. 12—**Nebraska State Fire School.** Regional meeting, Ansley, Neb. Director, Otto B. Johannes, 2604-12th Street, Columbus, Neb.

Aug. 13-15—**University of Wisconsin Fire School.** Annual meeting, University of Wisconsin, Madison, Wis. Director, James J. Lichty, Supervisor, Business Institutes, University of Wisconsin, P. O. Box 2098, Madison 5, Wis.

Aug. 13-17—**Pennsylvania Fire School—Fire Department Officership Course,** to be held at Lewistown, Pa. Director, Arthur Espey, Box 631, Lewistown, Pa.

Aug. 13-17—**International Association of Fire Fighters.** Annual meeting, Montreal, Que. Secretary-Treasurer, George J. Richardson, A. F. of L. Building, Washington, D. C.

Aug. 20-24—**Tennessee State Fire Service School.** Annual meeting, Mid-Tennessee State College, Murfreesboro, Tenn. Director, S. Elkins, Fire Department Instructor, State Board for Vocational Education, 215 Chestnut Street, Chattanooga, Tenn.

Aug. 21-24—**Pacific Coast Inter-Mountain Association of Fire Chiefs.** Annual meeting, Sacramento, Cal. Secretary-Treasurer, Jay W. Stevens, Merchants Exchange Building, San Francisco, Cal.

Aug. 22-25—**Montana State Firemen's Association.** Annual fire school, Polson, Mont. For information contact Chief Clayton Brown, Polson Volunteer Fire Department, Polson, Mont.

Aug. 26-28—**New York State Permanent Firemen's Association.** Annual meeting, Seneca Falls, N. Y. Secretary-Treasurer, Robert E. Mills, 420 Plymouth Drive, Syracuse 6, N. Y.

Aug. 27-31—**Western Pennsylvania Fire School.** Annual regional school, California, Pa. Secretary, J. A. Silbaugh, c/o Fire Department, Uniontown, Pa.

Aug. 30-Sept. 1—**West Virginia State Firemen's Association.** Annual meeting, Hinton, W. Va. For information, contact S. H. Boland, Chief of Fire Department, Hinton, W. Va.

Sept. 3-4—**Georgia State Fire College—Inspectors' Course,** to be held at #7 Fire Station, Atlanta, Ga. Director, Harry Phillips, 46 Courtland Street, S. E., Atlanta 3, Ga.

Sept. 4-7—**Maryland Short Course for Firemen.** Annual meeting, University of Maryland, College Park, Md. Director, Robert C. Byrus, Director of Fire Service Extension, Box 85, University of Maryland, College Park, Md.

September 9—**Southern Wisconsin and Northern Illinois Firemen's Association.** Annual school, Savanna Ordnance Depot, Savanna, Ill. For further information, write program secretary, Kenneth Holt, Cassville, Wis.

Sept. 10-13—**Canadian Association of Fire Chiefs.** Annual meeting, Vancouver, B. C. Secretary-Treasurer Chief Allen Clark, Box 456, Lakefield, Ont.

750 Gallon Darley Pumper

The pump is the Darley Champion Type SH750 manufactured exclusively by W. S. Darley & Co. and used on all Champion Fire Apparatus. A 3-stage centrifugal with superior engineering features which guarantee brilliant performance throughout the entire range of pumping requirements for fire fighting.

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Sept. 10-14, Oct. 22-26—**Pennsylvania Fire School**—Operation and Maintenance Fire Apparatus Course, to be held at Lewistown, Pa. Director, Arthur Espey, Box 631, Lewistown, Pa.

Sept. 10-14—**Ohio State Fire School and Arson School.** Annual meeting, Ohio State University Campus, Columbus, Ohio. Director, Dr. Harvey Walker, Ohio State University, Columbus, Ohio; Co-Director, Wayne Jenkins, Chief of Fire Prevention, State Fire Marshals' Office, Wyandotte Building, Columbus, Ohio.

Sept. 10-14—**Virginia State Fire School.** Annual meeting, Norfolk, Va. Director, Clay A. Easterly, Fire Marshal, P. O. Box 1112, Martinsville, Va.

Sept. 11-14—**Indiana State Fire School.** Annual meeting, Purdue University, Lafayette, Ind. Director, Professor Shelby Gallien, Public Safety Institute, Purdue University, West Lafayette, Ind.

Sept. 14-15—**Piedmont Fire Safety Seminar.** Annual meeting, Winston-Salem, N. C. Chairman, W. G. Dunham, c/o Winston-Salem Chamber of Commerce, Winston-Salem, N. C.

Sept. 14-15—**Jefferson County Volunteer Firemen's Association.** Annual convention and tournament, Dexter, N. Y. Secretary, Lewis Z. Horr, Great Bend, N. Y. Chairman, Chief Ralph Lamon, Fire Headquarters, Dexter, N. Y.

Sept. 15-16 and Sept. 22—**Alert Firemen's Fire Training School.** Six evolutions will be on the schedule permitting each enrollee to select any four for attendance. For information, contact Chief Clayton Quenby, Holt, Mich., Director of the school.

Sept. 16—**Nebraska State Fire School.** Regional meeting, Imperial, Neb. Director, Otto B. Johannes, 2604 - 12th Street, Columbus, Neb.

Sept. 17-18—**New Hampshire Fire Chiefs' Club.** Annual training school, Grenier Air Force Base, Manchester, N. H. For information, write Chief Robert Douglas, Base Fire Department, Grenier Air Force Base, Manchester, N. H.

Sept. 17-20—**International Municipal Signal Association.** Annual meeting, Denver, Colo. Secretary, Irvin Schulsinger, 130 West 42nd Street, New York 36, N. Y.

Sept. 18-19—**Iowa Firemen's Association.** Annual meeting, Red Oak, Ia. Secretary-Treasurer, Carl H. Fuchs, 2749 Kinsey Avenue, Des Moines, Ia.

Sept. 20-22—**Westchester County Volunteer Firemen's Association.** Annual meeting and parade, North Tarrytown, N. Y. Secretary, John R. Bailey, Box 1, Baldwin Place, N. Y.

Sept. 30—**Nebraska State Fire School.** Regional meeting, Atkinson, Neb. Director, Otto B. Johannes, 2604 - 12th Street, Columbus, Neb.

Oct. 4-6—**Ohio Fire Chiefs' Association.** Annual meeting, Hamilton, Ohio. General Chairman, Chief George Schlotterbeck, Fire Headquarters, Hamilton, Ohio.

Oct. 8-9—**Georgia State Fire College—Fire Engineers' Course,** to be held at #7 Fire Station, Atlanta, Ga. Director, Harry Phillips, 46 Courtland Street, S. E., Atlanta 3, Ga.

Oct. 15-18—**Kansas Fire School.** Annual meeting, University of Kansas, Lawrence, Kans. Director, Clyde A. Babb, 111 Fraser Hall, University of Kansas, Lawrence, Kans.

Oct. 22-26—**National Safety Council.** Annual Safety Congress and Exposition, Chicago, Ill. For further information write R. L. Forney, Secretary, National Safety Council, 425 N. Michigan Avenue, Chicago 11, Ill.

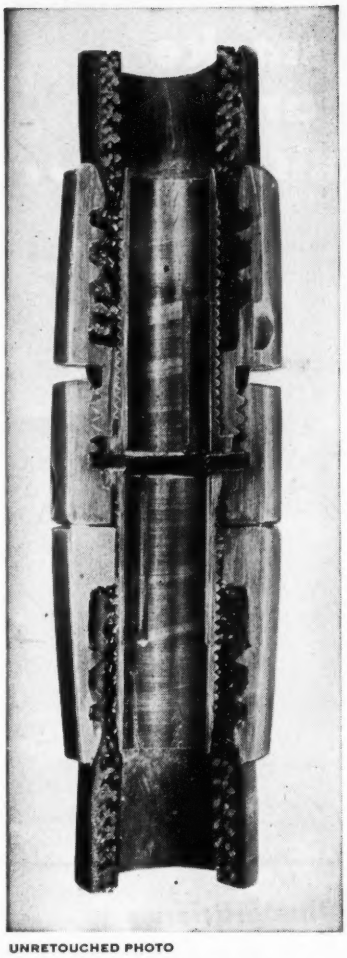
Oct. 23-25—**Illinois Firemen's Association.** Annual meeting, Springfield, Ill. Secretary, Roy W. Alsip, Box 8, Champaign, Ill.

Oct. 24-26 (tentative)—**Arizona State Fire Training School.** Annual meeting, Phoenix, Ariz. Director, Battalion Chief Jake Siken, Fire Fighting Instruction Supervisor, 49 South 1st Street, Phoenix, Ariz.

Nov. 2-3—**International Rescue and First Aid Association.** Annual meeting, Toledo, Ohio. For information, write Max Spray, 201 South Washington Street, Alexandria, Va.

November 11—**Great Lakes Division, International Association of Fire Chiefs.** Annual meeting, Hotel Alcazar, Miami, Fla. Secretary-Treasurer, Chief Elmer Stough, 605—4th Street, Lorain, Ohio.

Nov. 12-16—**International Association of Fire Chiefs.** Annual meeting, Miami, Fla. Secretary-Manager, B. Richter Townsend, Hotel Martinique, Broadway at 32nd Street, New York 1, N. Y.



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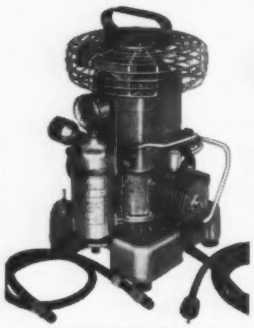

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CONCEALED SPACES

Continued from page 578

top riser. Without warning the smoke in the second story hall turned to bright flame, with little sound beyond a prolonged whoosh. The rapid expansion pushed the burning smoke down the stairs brillantly lighting the stairway. Very little effort was needed to get down the stairs. I may have touched two steps. Like the others, my recollections of the downward trip are sketchy. I remember the stairs brillantly lighted by the flare-up, my trying to touch only every sixth stair, being pushed down by the explosion, the burning of eyebrows, and hoping the other men were getting out.

None of the involved firemen apparently was sure whether the explosion came from the concealed space under the second story floor. In retrospect, it could not have been predicted any more than many other similar occurrences. It is true that satisfactory ventilation through the roof had not yet been established; however it appeared like the smoke in the building was not under great pressure.

Interior attack abandoned

With the explosion it became evident that effective interior attack could not be maintained, and that the fire would have to be fought from the outside, demonstrating the forethought of the chief in early ordering additional companies and lines in place outside the building. Company 6 had moved to No. 1 station when the original move-up company, Engine 2, was ordered to the fire. At midnight, Engine 6 was called to the scene leaving only Engine 5 in service and not committed at the fire. As off-shift firemen reported for duty they manned the reserve aerial truck, and Engine 2 from the repair shop, and brought them to the fire, while they put the 1926 Ahrens Fox 1000 gpm pumper in service at Station 1 in case of a second fire.

Engine 3 was coupled to a hydrant across 100-foot wide Pike's Peak Avenue, and two lines were stretched from it to a multiversal nozzle in the street in front of the fire building. Using a 1¾-inch tip, a stream was thrown to the roof of the burning building. Two 2½-inch lines were taken from Engine 3 to the front of the Peak Theater as a precautionary measure, inasmuch as there was considerably doubt whether the fire wall would hold. Pumping from a 6-inch main through 5-inch soft suction, this 750 gpm Class A pumper supplied these four lines with ease, drawing pressure down to 10 psi on the compound gage, and maintaining 120 psi on the two lines to the deluge set, while hand lines were gated down to 80 psi.

Assistant Chief Dutcher took charge of the fight in the alley at the rear. A second line was brought from Colorado Avenue up the alley and to the roof just west of the burning building. A third line was brought down the alley from Nevada Avenue and operated in the small yard in the rear of the shoe store through second story windows. Engine 4 was

coupled to a hydrant at the corner of Colorado and Tejon and pumped through two lines to a multiversal with 1¾-inch tip operated from the alley into the rear of the involved building. Dense smoke drifted down into the alley lowering visibility and complicating conditions for the fire fighters. Electric power lines overhead in the alley also were a constant menace.

Engine 1 had an excellent water supply from its hydrant on a 12-inch main through 6-inch soft suction, plus the original 2½-inch supply line. Eventually this 1000 gpm pumper supplied six lines of 2½-inch hose at pressures up to 160 pounds and still had a residual pressure of never less than 80 pounds on the compound gage. Lines from this pumper included two which were siamesed into the ladder pipe on the 100-foot aerial, one into the front of the Bates Drug Store, the original line into the front of the Shoe Circle, one line up the 50-foot extension ladder to the roof just west of the fire building, one up the reserve aerial to the roof of the theater building, and two other lines of 1½-inch hose.

Typical combustible construction

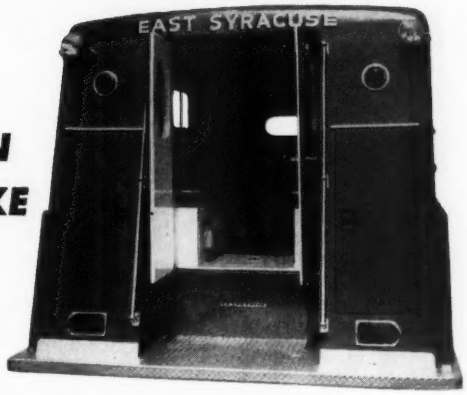
The involved building had a frontage of 50 feet on Pikes Peak Avenue, and was 150 feet deep. Originally it had been two buildings, with brick exterior walls with only a frame wall separating them. On the east this building had no wall of its own, but used the theater's west wall. The false ceiling extended over the entire depth of the building on the east side, occupied by the Shoe Circle, but only over the rear 112 feet of the west half of the building, comprising the ceiling of Bates Coffee Shop with its kitchen. In front of this lunch room was a barber shop, which had no dropped ceiling. There were approximately two feet between the original ceiling and the false ceiling. Runs between floor joints were continuous over the shoe store and the coffee shop, giving the fire a space almost 50 x 150 feet and two feet deep, with no means of access or ventilation.

A fire wall separated the fire building from the structure on the west housing the Bates Drug Store, and about 45 feet back from the street an opening had been cut through this wall connecting the drug store and coffee shop. No fire door had been provided to seal this opening. Engine Company 3 operated a line through the drug store and took considerable punishment to keep fire from breaking through this doorway. Its crew's efforts were crowned with success and the fire loss held to a minimum although there was considerable water damage to merchandise.

During the fire this west fire wall was examined and found to be pierced by a hole about 15 inches in diameter, with no masonry filler, but only covered by concealing plaster on the inside of the involved building. At another location a 6 x 15-foot section of this fire wall fell, but fire spread was prevented by the streams operated from the east and west roofs to protect these two openings.

The fire wall between the involved

IT'S ATTENTION TO DETAILS LIKE THESE, THAT EXPLAIN WHY



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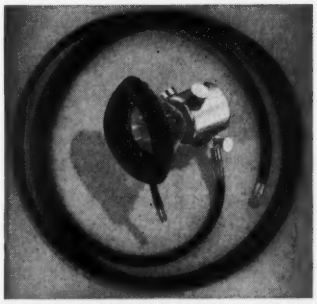

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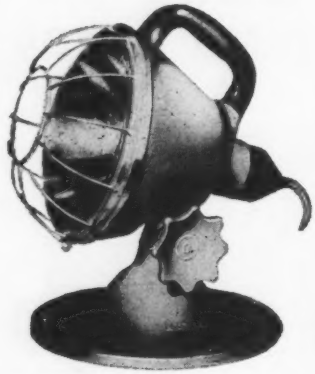

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building and the Peak Theater to the east developed some hot spots, but held the fire. The three lines on the roof to the west and two on the east were directed to cool these spots. Truckmen took turns operating the ladder pipe, elevated about 50 feet above the street, to wet down the critical areas. A 425 gpm jumbo fog tip was used on the ladder pipe, and the pattern was varied from fog to straight stream as required. Later this was changed to a 1½-inch straight tip to give greater reach.

Although the fire broke through the roof 30 minutes after the explosion, the large quantities of water dampened the fire's severity. Nevertheless it continued to burn stubbornly beneath remaining portions of roof and in sheltered parts of the ruined building. It was not until about 4 a.m., almost five hours after the initial alarm, that the fire was considered under control, and some of the lines could be shut down. The first company to return to quarters left the fire at 5:35 A.M., and the last did not leave until 7:48 P.M., almost 21 hours after the initial alarm. To prevent undue fatigue for the men, companies were rotated, once the fire was controlled.

Due to numerous well distributed hydrants in the high value district only 100 sections of hose were needed to make up the 16 lines used.

The total direct loss from this fire has not been determined as yet, but estimates run about $500,000. The indirect loss probably never will be known. Twenty-four hours after the fire all safes were fished out of the ruins, each with contents preserved.

Cause a mystery

Prolonged search was made by Fire Warden Emmett Thurman for the source of ignition for this fire. Study was made of the area involved when fire was first discovered and evidence was obtained from the depth of char. With one exception, combustion was limited to the portion of the building above the first floor's false ceiling. At only one point was there fire below this level, and that was between one pair of studs in the center partition of the building. Evidently the point of origin of the fire was in the center wall between these studs or in the space above the false ceiling in this area. In such concealed spaces, electric wiring was believed the most likely source of ignition.

A prominent restauranteur, Mr. Joe Reich, proprietor of the Swiss Chalet at 117 E. Pikes Peak, opened his restaurant, and distributed many gallons of hot coffee, rolls, and pies to the weary and chilled firemen. Fine cooperation was given by the police department. Fire lines were set up to keep spectators out of danger and to provide firemen working room. Off-duty police returned to duty and helped in shifting hose lines; they rendered yeoman service also in distributing coffee to the fire fighters, even taking an urn of coffee up the reserve aerial to the roof to succor the firemen there.

Radio station KRDO brought its mo-

bile unit to the fire scene and broadcast throughout the fire. In addition, they set up a public address system, with a microphone for the chief's use in the street in front of the fire building, another microphone on the theater roof for use of a captain directing operations there, and loud speakers on the roof of the mobile unit in the street. By this medium Chief Lausch's voice was clearly audible over the scene of operations as he directed fire fighting at the front of the building.

Mr. George H. Krause, whose offices on the second story were burned out along with records of the Colorado Springs Company which were of great historical interest, sent a check for $500 to the Colorado Springs Fire Department in appreciation of its valiant efforts at the fire. It was decided to apply $250 toward the annual Christmas party for the firemen and their families, and put the balance in the pension fund.

Building not covered by code

The city's building code requires that whenever a false ceiling is constructed, either sprinklers be installed or a one-hour ceiling be put in above it. The building burned out was renovated and had its false ceiling built before the present code was put in force. As a result of this and a similar fire about five years ago, it is hoped that the building code will be strictly enforced and false ceilings will be properly protected.

Colorado Springs is a rapidly expanding city with a growing population estimated at about 55,000. Insurance-wise it is rated as Class 4, with a total of 1682 deficiency points as of last inspection in 1940. The fire department is superbly trained and well equipped and the 71 men work on a two-platoon system. There are six engine companies and one aerial truck in service. A policy has been in effect that as equipment becomes overage, it is placed in reserve, to be manned by off-shift firemen and put into service in the event of a major fire.

Summary of Fire Department Log

Tuesday, April 10, 1956

11:07 p.m.—Phone alarm, smoke in Peak Theater. Engines 1, 3 and 4 and Aerial 1 to fire.

11:11 p.m.—Engine 2 arrives at No. 1 Station on move-up.

11:35 p.m.—Second alarm by radio. Engine 2 to fire.

11:37 p.m.—Radio request for all off-shift firemen to return to duty.

11:38 p.m.—Engine 6 arrived at No. 1 Station on move-up.

12:00 p.m.—Third alarm by radio. Engine 6 to fire.

Wednesday, April 11, 1956

12:03 a.m.—Engine 5 arrived at No. 1 Station on move-up.

12:15 a.m.—Off-shift personnel reported for duty. Reserve aerial to fire. Ahrens-Fox pumper in service at No. 1 Station. Pumper of Company 2 taken from repair shop to fire.

5:35 a.m.—Engine 3 back in quarters (first company released from duty at fire).

7:48 p.m.—Engine 6 back in quarters (last company to be released from duty at fire). □□

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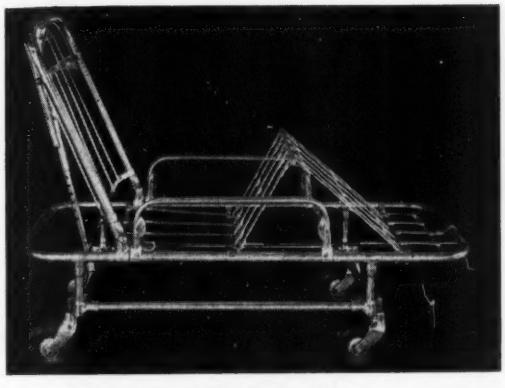

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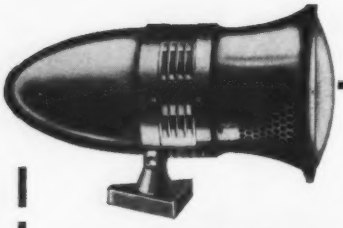

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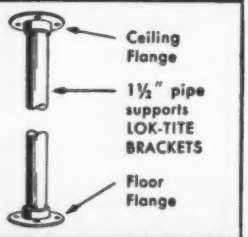

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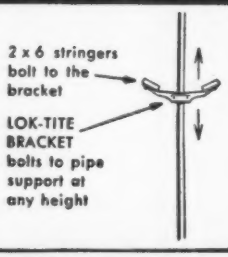

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MARINE RESCUE

Continued from page 573

attached to the towing vehicle when needed. The trailer becomes a launching dolly at the water edge and is pushed by the crew into the stream or lake until sufficient depth is reached to float the boat. In many departments the rescue truck is the only one fitted with a trailer hitch for towing purposes. In Council Bluffs, Iowa, the trailer hitch is left with the boat trailer at all times. All trucks in this department have holes drilled in the rear step so that any vehicle may be used by simply placing the hitch in position and connecting it with two bolts. Chief Waldo Merrill of that city also reported that the trailer is equipped with warning lights for night driving. A simple plug and jack system connects the trailer lights to the apparatus electrical supply.

Storing boats

Many departments store their boats overhead in fire stations. Although out of the way during normal fire department activities, they are readily available.

Some craft are suspended by block and tackle from the ceiling directly over apparatus upon which they can ride "piggy-back." Others are held by a system of movable arms or cranes and hooks, which support the boat upside down by the gunwales or rails. When needed, they are lowered by the crew onto the apparatus. Both of these methods are space-savers in the fire station and have the virtue of speeding response when called for.

Training in marine operations

The fire service is continually faced with emergencies of all types in the normal course of events. Often in the extra-curricular activities in which the fire department plays a prominent part, there lies potential danger to its personnel.

In all forms of marine work, particularly during flood operations, great care must be exercised to safeguard the lives of rescue crews. A single mishap might serve to compound a tragedy already in being. Safety must become a shiboleth with these crews. And safety can only be had through watchfulness and training.

Fire Chief Bernard J. Padgett of the Alexandria, Va., Fire Department sums it up in these words of advice: *We should like to offer a reminder that marine operations are a specialty that requires personnel to be trained and qualified to use the equipment and devices designed for it. We believe that personnel assigned to this work be swimmers, and if possible, graduates of aquatic schools. While working in small boats, life preservers should be worn at all times. Personnel required to use underwater diving equipment should have expert training and actual experience in its use.*

Many fire chiefs reporting on marine activities stressed the importance of training and drilling for the particular tasks

fire service personnel will be called upon to perform, summer and winter, under varying handicaps. *It is not enough to be able to tie knots,* said one chief, *men who work around the water must not be afraid of it, must know how to make it work for them; and they must know how to use all the tools of the trade in the darkest night as well as the brightest day.*

Unlike training in other degrees of firemanship, handlers of boats for the most part must learn by doing. Men who have an aptitude for the water should be the first to be assigned to marine emergency operations. □□

Acknowledgment: The editors wish to thank the many fire departments, rescue squads and others who so generously contributed to this study.

AERIAL TOWERS

Continued from page 575

The tests further proved that under dual operation, both nozzles discharged approximately 1000 gpm with a 1¾-inch tip. It was noted that when the ladder tip was placed against an open window a 30-degree fog pattern penetrated the floor fully 60 feet, giving evidence of its possibilities for ventilation as well as extinguishment.

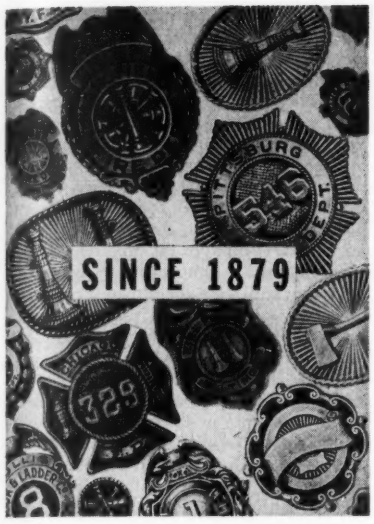
As a result of this and subsequent tests, a number of conclusions were reached by the department engineers and official heads concerning the application and operation of the aerial towers. Eleven such American-LaFrance apparatus have been distributed to Ladder Companies 1, 3, 18, 27, 40, 42, 47, 107, 108, 120 127. These conclusions have been incorporated into Departmental Bulletin #9: *Use of Metal Aerial Ladders as Water Towers,* which was prepared by Chief Supervising Engineer Harry M. Irwin.

A factor not generally realized by departments that have employed ladder pipes on aerial ladders is the facility with which such an assembly as is described herein can be utilized both as a water tower and a standpipe for advancing hose lines into a burning building.

New York's experiments with the layout demonstrated the versatility with which the aerial tower can be utilized as such a standpipe to supply hose lines on upper floors. With the fire knocked down with the ladder pipe, the 3-inch feeder line can easily be used to supply hand lines stretched in on the floor with donut rolls, or accordion flaked assemblies, either taken up the ladder, or up within the building.

In such an operation the ladder need only be placed in a window, a gated "Y" connected to the feeder line at the uppermost connection, and two hand lines stretched to the interior of the building with minimum manpower and effort. Or, if preferred, a single line may be attached directly to the ladder pipe after removing the tip, and this taken into the fire building.

Another fact which the tests confirmed and which have been demonstrated by



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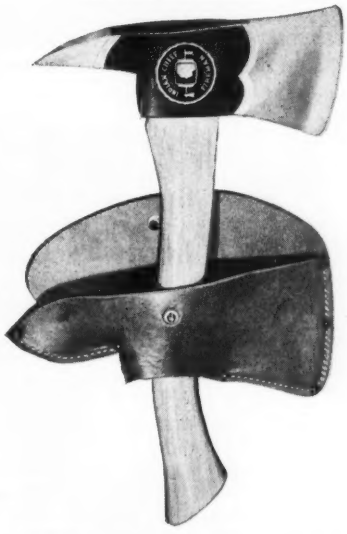

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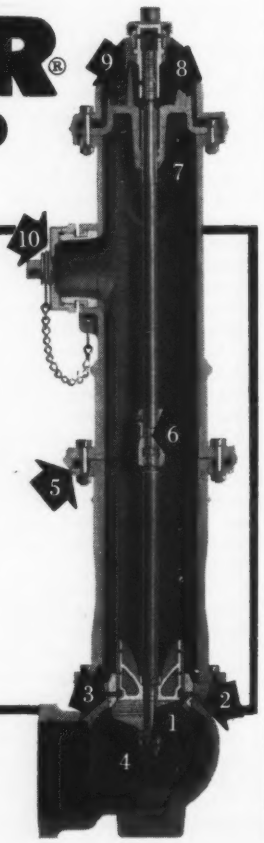

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numerous other experiments wherein large volume fog heads were employed on ladder pipes and major appliances, is the possibility of using such ladder assemblies to set up water fog curtains. As can be visualized by examining the accompanying picture of the ladder pipe fog nozzles in simultaneous operation, a heavy and extensive fog barrier can be set up against flame and radiated heat, utilizing a battery of aerial towers spotted to blend a number of fog streams. If desired, combinations of heavy water fog and powerful straight streams could be used to gain personnel and equipment protection with the former, and long range striking power with the latter.

Leading fire officials are in general agreement that the application of heavy aerial streams on all kinds of through-the-roof or wide area fires such as lumber yards etc., will make for more effective fire fighting. The possibilities for elaborating on this technique are limitless and eventually may provide an answer to the serious question of how best to cope with fire storms and multiple conflagrations such as would eventuate in an enemy atomic bomb attack.

It is pointed out that ground jacks or tormenters, must always be firmly set on a good foundation and added stability secured by jackknifing the tractor, as indicated by Fig. 1. Another safety precaution emphasized is the gradual increasing or decreasing of pump pressures to avoid any possible strain, or whipping action, on the ladder structure.

Under some conditions, better stream direction can be secured by placing a man in operating position on the ladder where he can observe fire conditions, but generally it is preferable the Bulletin indicates, to operate the pipes by remote control. If pipes are operated from the ladder, personnel should use life belts. The changing of tips or attaching the fog head can be quickly done by lowering the ladder, making the change and elevating it, or by sending a man up the ladder. The first method is recommended as preferable.

The fog nozzle is adjustable for 30-, 60- or 90-degree fog pattern, or for solid stream. The 30-degree fog cone is believed most effective for the majority of fire conditions where use of fog is indicated, as wider patterns may not have sufficient reach.

To guard against error in judgement as to the safe extension of the ladder at angles below 60 degrees when using ladder pipes, the center line of the apparatus should be placed not more than 35 feet from the building. In this position, for fires at high elevations and the ladder at 70 to 80-degrees, the nozzle would be 14 feet to 24 feet from the building. Where frontal coverage is not a problem, the apparatus may be placed approximately 25 feet from the fire building to provide deeper penetration. Closer placement, it is pointed out, may subject the apparatus to heat blasts and possible damage from falling debris.

It is planned to eventually equip all of New York's 127 aerial ladders with ladder pipes. The eleven units already so fitted will provide at least one aerial

tower on first alarms from high hazard areas in all five Boroughs. □□

The editors gratefully acknowledge the permission of Fire Commissioner Edward F. Cavanagh, Jr. and Chief of Department, Edward Connors to use the data upon which this report is based. Also the assistance of Acting Battalion Chief Harry Irwin, Supervising Engineer, Tom Ryan, and Hon. Battalion Chief Clarence Meek, Department Librarian. Special appreciation is extended the Photographic Unit, Lieutenants, Ray Helriegel and Heffernan and the Editor of "WNYF," Edward J. P. Brady.

Selective Calling Radio Equipment for L. A. County

Selective calling radio equipment for dispatching apparatus has now been installed in more than 25 per cent of the Los Angeles County Fire Department's 94 fire stations.

Six additional selective calling units will be installed in the 1956-57 fiscal year, Asst. Chief John D. Barton, head of the department's Special Services Division reported.

"Selective calling is saving our taxpayers thousands of dollars a year," Chief Barton said. "We installed our 27th unit June 30 and find that the radio system is also increasing our efficiency."

The chief pointed out that communications for his department has many unusual problems since stations are located in all parts of the 4100 square miles of Los Angeles County.

Forty-three stations are on 1000 miles of direct county-owned telephone lines, while 14 are connected to dispatching centers by leased commercial telephone lines.

In addition, seven stations have apparatus dispatched by dialing special fire phone numbers, and three volunteer stations have sirens activated by dial phones.

L. A. County also is in the process of installing two microwave links to improve radio reception in the eastern and southwestern parts of the county.

—Cliff Dektar

New York City Recognizes Resuscitators

According to press accounts, the New York Fire Department has "recognized the efficiency and practicability of the resuscitator" and has awarded contract for the first six such machines.

One each of the new machines is to be allocated to the five rescue companies of the Fire Department, and the sixth will go to the Medical Bureau.

According to reports, the present Fire Department administration, under Fire Commissioner Edward F. Cavanagh, Jr., and Fire Chief Edward Connors, is the first to accept this modern type of equipment.

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New ONAN CCK Electric Plants
MORE OUTPUT per pound of weight!
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Way ahead in performance and value! More powerful, two-cylinder, air cooled Onan gasoline engines of 4-cycle, horizontally-opposed design give smooth, quieter, effortless performance. Short stroke and moderate speed cut engine wear, give longer life. Quality features include rotating Stellite-faced exhaust valves, solid Stellite valve seat inserts, full pressure lubrication. Onan's exclusive Vacu-Flo cooling system available for difficult or "buried" installations.
Completely Onan-built, with Onan gasoline engines direct-connected to Onan all-climate generators in compact, rugged units. Available in stationary, portable and standby models with a wide range of accessories.
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Available with carrying frames or 2-wheel dollies. Easily portable. Other Onan portable models: 500 to 10,000 watts.
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PORTABLE ELECTRIC POWER

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MODEL BHA 15L LIGHT WEIGHT 1800 WATT UNIT ON SKID

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WRITE TODAY for new catalog and prices on 250 to 3600 watt units designed for Fire Department use.

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Persons in the News

Integration of Police and Fire Fails; Moore Chief at Monterey Park

Monterey Park, Cal., has its first permanent fire chief since the ill-fated experiment of a police-fire department integration program.

Harry C. Moore, 45, a fireman in the San Gabriel Valley community since 1944 is the new chief, appointed by City Manager Fred Bien. He had been a captain since 1949.

Monterey Park's last permanent chief was Edward McElhannon who retired two years ago. He was followed by Public Safety Director John Cordell.

The offices were separated last January 1 and Captain Roy Teague became acting chief pending civil service examination.

Cliff Dektar

Chief Strickfaden Honored

June 18 was named "Chief Strickfaden Day" by Mayor Sensenbrenner of Columbus, Ohio, in honor of Fire Chief Walter Strickfaden of that city's fire department, who is celebrating his 50th anniversary as a fire fighter.

The veteran Chief was tendered a surprise dinner by some 300 friends, at which the Mayor presented him with a framed proclamation extolling his service. Leo L. Philips, Safety Director, on behalf of those at the banquet, presented a gift of cash for shrubs for the chief's new home. Columbus Local No. 67, International Association of Fire Fighters in the name of the entire department, presented a lawn edger and other gifts to brighten the chief's hobby of gardening. A final gift was tendered by Service Director Floyd C. Redick in the shape of an imitation fire plug filled, the director said, with "fire water."

Chief Strickfaden joined the department in 1906 as an emergency sub-fireman and, in his own words, a "general clean-up man." He has lived to see the organization completely modernized and rated well at the top among progressive

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departments. Many of the improvements were achieved during his administration.

The Chief, who is termed a "fireman's fireman," is widely known in the nation's fire services. A Columbus paper epitomizes his career in these words: "His 50 years are symbolic of a personnel unexcelled and an era of change unprecedented in fire fighting. Hats off to the Chief!" ***Thanks, Larry Donovan.***

E. N. Montgomery, Chief at Boston, Mass.

Edward N. Montgomery has been appointed Chief of the Boston, Mass., Fire Department, replacing Chief John V. Stapleton who resigned because of ill health after 32 years in the department, five of which he was Chief.

Chief Montgomery has been a fire fighter for 44 years, serving most recently as an assistant chief in charge of the Boston Fire Prevention Division.

Fairfax County Plan Elects Officers

More than 400 persons attended the annual dinner and election of officers of the Fairfield County Fire Chiefs' Emergency Plan on May 23 in the Ritz Ballroom, Bridgeport, Conn. Elected as new president of the group was Chief Orville A. Sawyer, of the Sound Beach Fire Department. Chief Sawyer succeeds Fire Chief Sylvester E. Jennings, of Bridgeport. The outgoing president was presented with a gift of a camera by Chief Sawyer in behalf of the Plan members.

Other officers elected were Larry Ford, of Redding Center, first vice president; John Pickering, of New Canaan, second vice president; William Strasser, of Noroton, third vice president; Chief B. Fred Smith, of Turn of River, sergeant of arms; Eugene Maher, of Darien, treasurer, and William G. Hennessey, of Bethel, secretary.

Named directors for two years were Chief Jennings, Chief Francis Strain, of Round Hill; Chief Francis Moylan, of Ridgefield, and Chief George Hanna, of Danbury. Also, directors for one year, Chief Harold Shippey, Westport; Assistant Chief John F. Gleason, Bridgeport; Chief Robert Frisbie, Springdale, and Assistant Chief Louis Catlin, Shelton.

Tom Magner

Chief Sylvester E. Jennings (left) of Bridgeport, Conn., outgoing president of the Fairfield County Fire Chiefs Emergency Plan and Chief Orville A. Sawyer of the Sound Beach Fire Department, Old Greenwich, newly elected president

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With Excellent Performance

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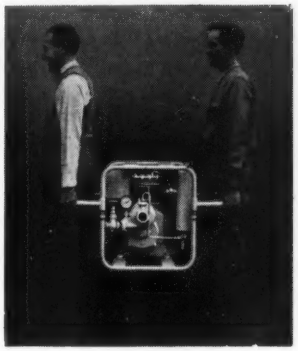

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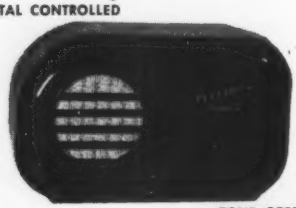

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THE WATCH DESK

overhauling the firemanic news of the day

Do It Yourself Craze Hits Corning

Corning, N. Y., follows custom and paints its hydrants yellow, red and green to indicate varying water pressures.

The Cornian folks are also a bit do-it-yourself-conscious, too.

Imagine the surprise of Philip Grannan, public works superintendent, when he spotted one of the hydrants decorated in delicate shades of gray and pink.

Investigation disclosed that a little old lady who lives nearby, thought the dull red was too drab, so she painted the hydrant more to her liking.

It's getting so firemen'll have to carry color charts on all apparatus!

Hot Bath

Entering a building filled with smoke is not unusual for Chief Frank A. Mabbett and his fire fighters of Mystic, Conn. But when the fire is in a bathtub—then that's something else again.

On May 5 the Mystic Fire Department received a call for a fire in a two-family tenement. The building was full of smoke and the cause of it all was centered in the bathtub in the home of Albert Potter. The tub had been filled with clothes and Chief Mabbett theorized that a lighted cigarette had been dropped accidentally.

Thanks Tom Magner

Department of Red Faces

Fire trucks have been known to catch fire, but it is a rare situation when firemen have to summon rival fire fighters to put out a blaze in their apparatus.

Such problems faced the South Glens Falls, N. Y., volunteers recently when their pumper was en route to their fire station. While negotiating Route 9 near Siena College, the brake lining started to smoulder. A quick stop was made and all hands set to work to extinguish the fire.

Reports fail to give the reason why, but it is disclosed that the Shaker Road Fire Department was called upon to aid the luckless Glens Falls lads, and they did so. The fire was put out without much fuss or damage, the only casualty being a South Glens Falls vamp who was conked on the noggin and had to be treated by the Shaker Road Emergency Squad which also was on hand.

The House?—It Burned Down!

This chain of events occurred in the Western Virginia mountain town of Norton, last winter.

A fire engine, answering an alarm for a house blaze, was wasting no time on Route U. S. 58 to reach the scene, flashing lights and siren going.

One Paul Carroll, approaching in a pickup truck, swerved to give the firemen the right-of-way.

The pickup truck skidded on an icy spot and dropped 15 feet over a bank. Firemen untangled themselves to order an ambulance for the injured Carroll, who suffered cuts and abrasions.

As the ambulance, with Carroll inside pulled out, a passenger car slammed into its left side. The vehicles blocked the flow of traffic.

Then another car skidded into a ditch trying to avoid vehicle No. 3. To cap the climax, a fifth car missed the ditch but hit No. 3.

All five vehicles, including the fire rig, received damage.

The house?

Oh yeah, that burned down!

Hot Off the Tape

The Junior Fire Department at the Jefferson elementary public school, San Diego, Cal., adopted a spaniel named "Ko Ko" as mascot. The dog, owned by a fire marshal, is trained to bark when he sees or sniffs a lighted match or cigarette. . . . In Russellville, Ky., Assistant Fire Chief Eddie Bush was burning trash in his backyard when the fire siren let go. He beat it from home on the double. When the fire was out, Bush hustled back to his house. The backyard blaze was out of control and he had to phone for a fire truck to come help him put it out. . . . Ronald Hood, 18, a service station attendant at Van Nuys, Cal., was jailed after he admitted setting fire to his boss's car because the latter gave him a bawling out. . . . Those falsies built into dresses may spell glammer to some, but they're headaches to laundries, fire insurance companies and to fire forces. The Columbus, Ga., Cleaners Association heard reports that several recent fires in cleaning shops have been traced to the padded material being ignited by the high temperature used to dry clothes, according to the press. . . . In Galesburg, Ill., James Norton, 38, explained that his auto crashed into a parked car because *a hot cigarette lighter popped out of the dashboard into my lap.* . . . Another one of those accident-oddities occurred when Kenneth Knoebel, 15, of West Bend, Wis., suffered first and second degree burns on his hands and feet May 22 when a wire-controlled model airplane he was flying crashed into a power line. . . . Near Wilmington, N. C., an imploding television tube was blamed for knocking down the wall of a burning house. According to reports, the tube "exploded" during a fire in a suburban area. The force generated was so great that it knocked a refrigerator across a room and leveled a burning wall. The fire involved a duplex apartment. Two families were

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left homeless as a result. . . . Elmsford, N. Y., recently passed a dog-leashing law and caused the loss of that department's mascot. The big Dalmatian, of course his name is "Smoky," was accustomed to the run of the neighborhood and didn't take kindly to being kept in the firehouse. The vamps solved the situation by finding him a good home with a former fireman in nearby North White Plains. . . . In Des Moines, Ia., Gregory Sandage, 5, inquisitive, wanted to find out what was underneath the manhole cover in front of his home. He stuck his finger in the hole. The fire department pried him loose. . . . Two tots, aged 4 and 7, told Passaic, N. J., police they set fire to two tenement houses on a Sunday with matches a little girl gave them. The boys said the shingles popped like a gun. Fire officials estimated damage at $17,500. . . . Fifteen cars of a 40-car Rock Island freight train were derailed recently, knocking out phone service to five towns. Had the firemen worried, it did! . . . Detroit fire fighters also got a similar shock in May when alarm headquarters received 300 false alarms simultaneously (a record). Seems a thief took a four-foot section of master cable connecting the fire alarm boxes with the fire department dispatcher. When the cable was cut the alarms went off. . . . Speaking of false alarms, Yonkers, N. Y., police nabbed two boys, 13 and 12, for snapping boxes. *I ain't been to school in a week,* boasted the 12-year-old. . . . In Baltimore, Md., the filmy surplice of a 9-year-old boy caught fire as he was lighting candles during services at St. Edwards Catholic Church. The Rev. John Kerr leaped from the pulpit, hurdled the altar rail, grabbed a woman's coat, wrapped it around the boy and beat out the flames. A woman helped put out the flames with holy water. At the hospital the youth was reported in serious condition. . . . In Azle, Tex., a housewife proudly pressed the button of her doorbell to show a friend how it worked. Faulty wiring caused a fire which burned her six-room house to the ground.

Nice Time Had By All!

Rensselaer Polytechnic Institute is at Troy, N. Y. It is known for its engineering courses, and sober-minded students. Student exuberance has usually been on a low key. That is until January 28, last. Then, what was termed "pre-exam tension," was blamed for a campus outbreak that gave Troy firemen and police a hot time.

When more than 200 R.P.I. students, mostly freshmen, heaved books from dormitory windows the night of the 27th and piled them up and then set fire to them, firemen were called to put out the blaze. But a snowball barrage beat back the Brothers. They in turn called police who came and saw—and called for more help.

Thirty police, aiding the fire fighters, finally snuffed out the "exuberance"—and the fires. The students returned to their quarters—minus one of the ringleaders who was booked on disorderly conduct charge.

The Fireman's Choice

Powerful Light
When he needs it—where he needs it
Big Beam
PORTABLE ELECTRIC HAND LAMPS

Model 700-A 2000-foot beam

Most powerful, heavy-duty hand lamp of its size. Adjustable 6-inch head. Operates on four standard No. 6 dry cells.

Model 211 1500-foot beam

Popular price, light weight, easy to carry. Adjustable 5-inch head. Holds two standard 6-volt lantern batteries. Operates on one; other is a spare.

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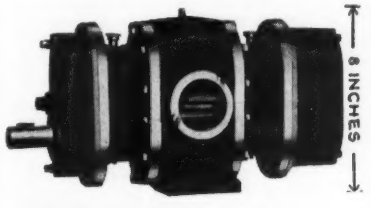

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Mechanical foam playpipes, Phomaire, complete with pickup tube (Worth $55.00). Our price only	15.90 ea.
2½" Siamese connections, plain, 1 male and 2 female, NST	4.75 ea.
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1½"x12" Plain hose nozzles, brass, IPT	1.25 ea.
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1956 Willys Special Heavy-Duty Champion 4 wheel drive Fire Truck with Cab & Chassis, rated at 8000 pounds G.V.W. with heater and defroster and power brakes. The same is equipped with the following: 500 G.P.M. front mount frost proof approved pump, 200 gallon booster tank, one reel with 150 feet of hose and nozzle, axe, pike pole, crow bar, extension ladder, roof ladder, two lengths of suction hose, heat exchanger, siren 360° roof light, two hose lights, hand lantern, four large compartments and a hose bed for 1000 Ft. of 2½" hose.

Priced at $4900.00 F.O.B.

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FOR SALE DEMONSTRATOR 1955 WILLYS SPECIAL 4WD COMMANDO FIRE TRUCK

In case of no roads, snow and ice Willys 4 wheel drive will get there.

1955 Willys Special Heavy-Duty 4 wheel drive Commando Fire Truck with open cab, rated at 8000 pounds G.V.W. with heater and defroster. The same is equipped with the following: 500 G.P.M. front mount frost-proof approved pump, 150 gallon booster tank, one reel with 150 feet of hose and nozzle, axe, pike pole, crow bar, extension ladder, roof ladder, two lengths of suction hose, heat exchanger, siren 360° roof light, two hose lights, hand lantern, four large compartments, and a hose bed for 1000 Ft. of 2½" hose.

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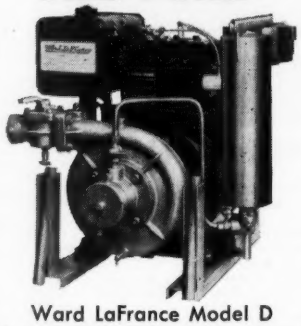

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Montgomery Votes Improvements

Voters of the City of Montgomery, Ala., have overwhelmingly approved eight bond issues totaling $5,675,000 for improvements and expansion of municipal facilities, of which $465,000 is earmarked for maintaining the high standards of the Montgomery Fire Department. Extensive capital additions will be made by the department in keeping with the recommendations of the National Board of Fire Underwriters.

Two new fire stations will be constructed in rapidly growing areas of the city and one station will be relocated. The latter will also include a new drill tower and training laboratory.

Fire alarm facilities will be improved and expanded in keeping with Class "A" standards. This will include new equipment for Alarm Headquarters, 100 additional boxes and installation of underground cable to replace all overhead circuits now in use.

Apparatus additions will include two 1,000 gpm pumpers and two 75-foot aerials for the new fire stations. Three older engines will be replaced with new 1,000 gpm pumpers and a hose wagon with 1,000 feet of 3-inch hose and turret nozzle will be added to make Engine 2 a two piece company. Replacement of five chief's cars and the purchase of a ¾-ton pick-up truck for utility use completes the program.

Fire Pensions Hit by Court Ruling

Los Angeles, Calif., fire and police department pensioners who asked a cost of living change in their retirement allowances were turned down in a Superior Court ruling handed down by Judge A. A. Scott.

The jurist agreed with the city's board of pensioners who opposed the retired fire and policemen's contention that they had a right to recover some $3,230,000 from the $17,000,000 pension fund under legal pay increases. The retired men based their petition upon a recent Supreme Court ruling that rendered invalid two old amendments to the City Charter.

Through their attorneys, Kenneth Sperry and Francis R. Bergman, the pensioners sought to set aside the city rule fixing retirement allowances at a set percentage of the employe's salary at the time of retirement. The rule, they said, was based upon amendments enacted in 1925 and 1927. The amendments have now been termed invalid.

The pensioners said that when they were employed by the city, the pension system was geared to comply with the rate of pay then current, fluctuating with the rise and fall of salaries. Wages have increased 50 per cent since 1943, they point out, but not their pensions. The pensioners' attorneys said the Superior Court decision will be appealed.

Paul C. Ditzel

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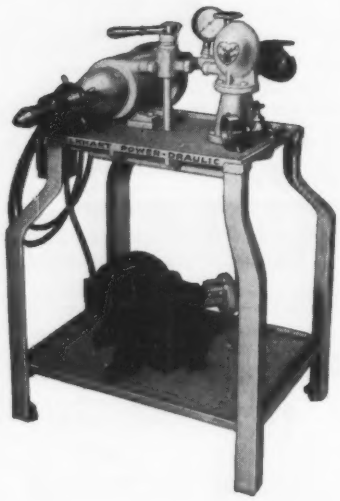

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